

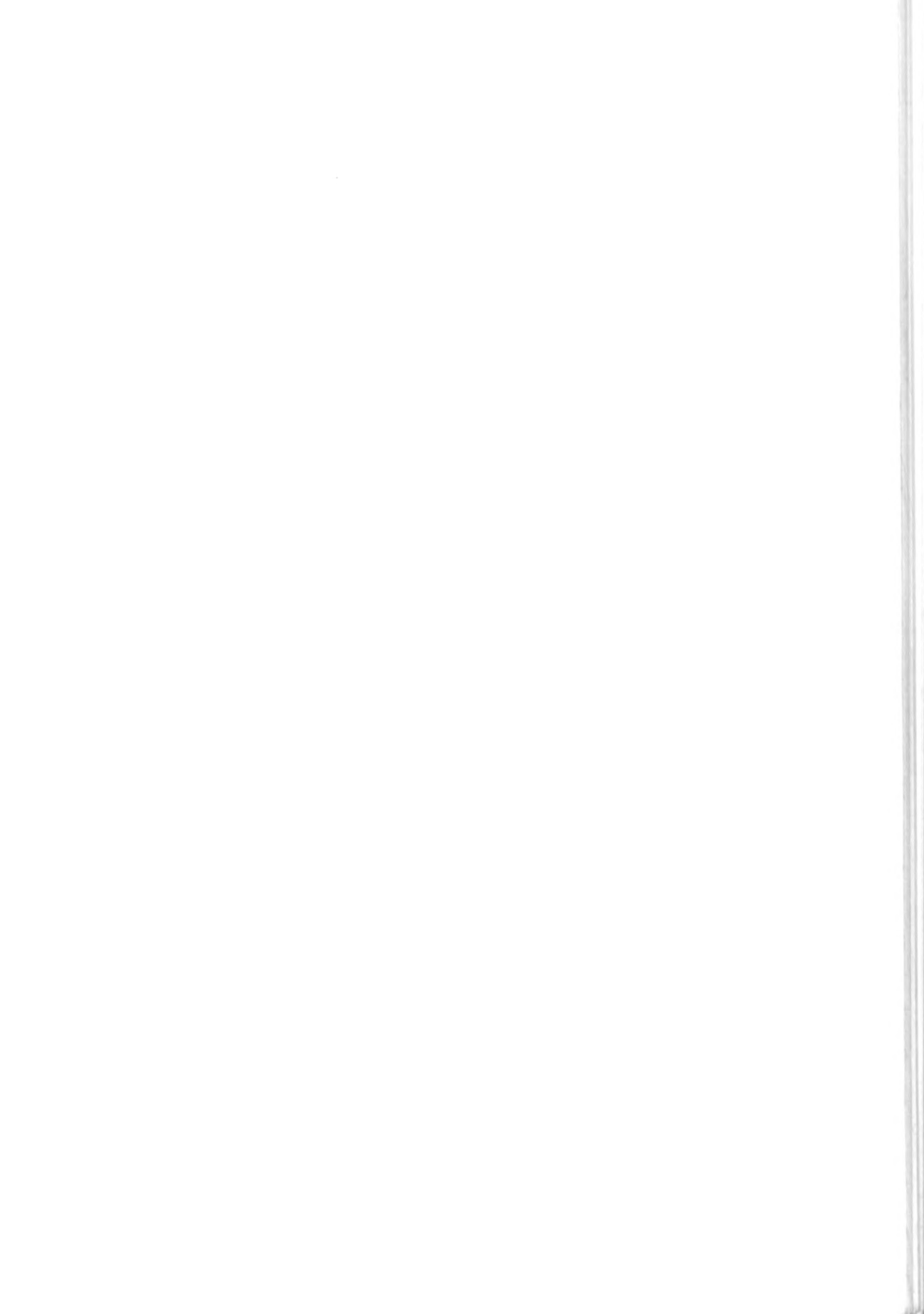


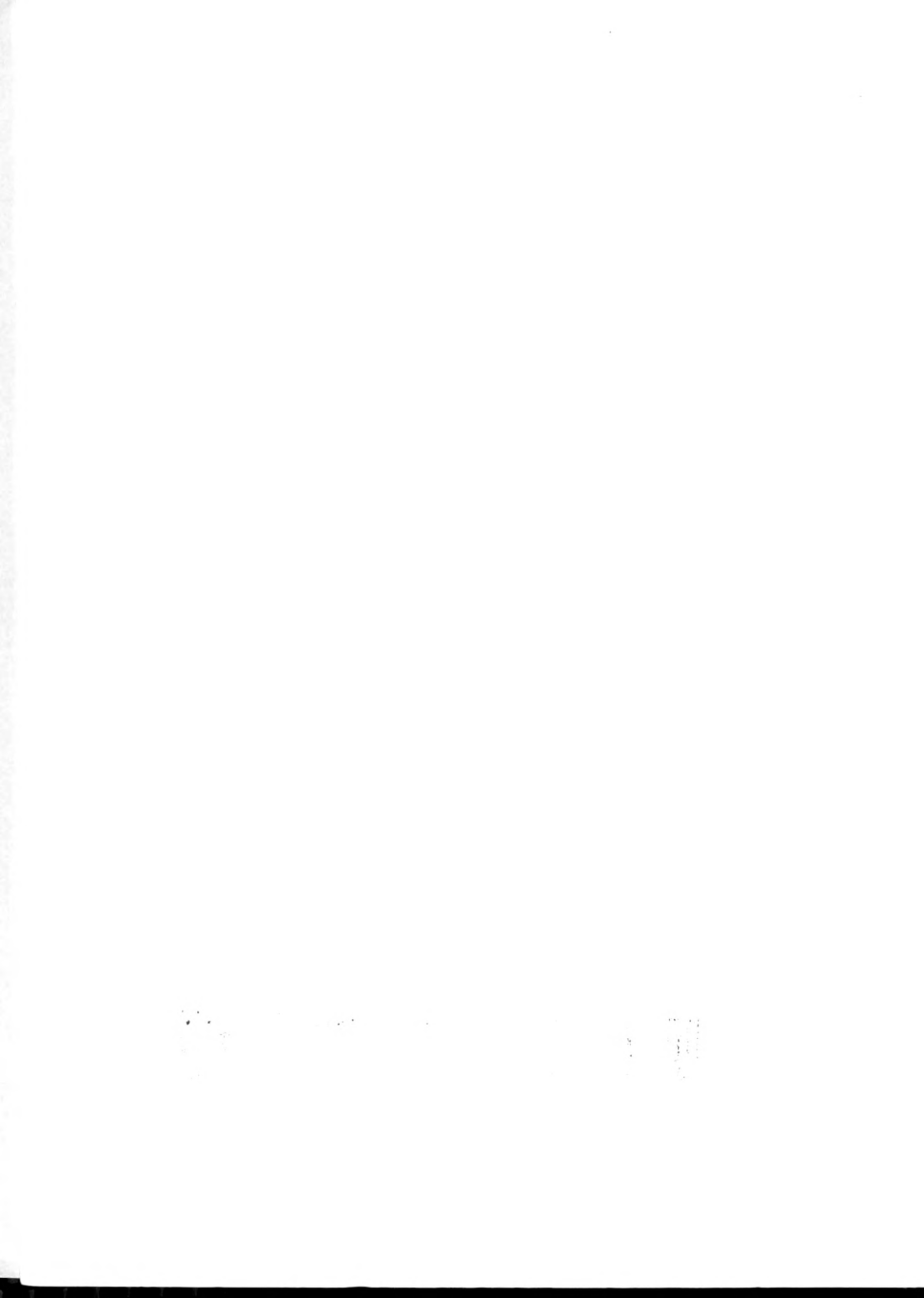
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The Resources Agency

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BULLETIN No. 130-75

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# HYDROLOGIC DATA: 1975

Volume I: NORTH COASTAL AREA

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BULLETIN No. 130-75

HYDROLOGIC DATA: 1975  
Volume I: NORTH COASTAL AREA

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VOLUME I  
NORTH COASTAL  
AREA

VOLUME II  
NORTHEASTERN  
CALIFORNIA

VOLUME III  
CENTRAL  
COASTAL  
AREA

VOLUME IV  
SAN JOAQUIN  
VALLEY

VOLUME V  
SOUTHERN CALIFORNIA

Figure 1  
BULLETIN No. 130  
AREAL COVERAGE OF VOLUMES

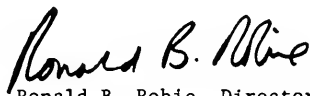
Area covered in  
this volume.

## FOREWORD

The data collection programs of the Department of Water Resources have been designed to supplement the activities of other agencies to satisfy specific needs of the State. Bulletin No. 130-75 presents useful, comprehensive, accurate, and timely hydrologic data which are prerequisites for monitoring environmental conditions as well as effective planning, design, construction, and operation of water facilities.

The Bulletin No. 130 series has been published annually in five volumes since 1963. Each volume presents hydrologic data for one of five reporting areas of the State. These areas are delineated on the map to the left.

This Bulletin No. 130-75 is the last of this series to be published. It is to be replaced with a statewide Bulletin No. 130, "Hydrologic Data Index", which will show what data are available and where they may be obtained.

A handwritten signature in black ink, reading "Ronald B. Robie". The signature is written in a cursive, flowing style.

Ronald B. Robie, Director  
Department of Water Resources  
State of California

## CONVERSION FACTORS

### English to Metric System of Measurement

<u>Quantity</u>	<u>English unit</u>	<u>Multiply by*</u>	<u>To get metric equivalent</u>
Length	inches (in)	25.4	millimetres (mm)
		.0254	metres (m)
	feet (ft)	.3048	metres (m)
	miles (mi)	1 6093	kilometres (km)
Area	square inches (in <sup>2</sup> )	$6.4516 \times 10^{-4}$	square metres (m <sup>2</sup> )
	square feet (ft <sup>2</sup> )	.092903	square metres (m <sup>2</sup> )
	acres	4046.9	square metres (m <sup>2</sup> )
		40469	hectares (ha)
		40469	square hectometres (hm <sup>2</sup> )
		.0040469	square kilometres (km <sup>2</sup> )
	square miles (mi <sup>2</sup> )	2.590	square kilometres (km <sup>2</sup> )
Volume	gallons (gal)	3.7854	litres (l)
		.0037854	cubic metres (m <sup>3</sup> )
	million gallons (10 <sup>6</sup> gal)	3785.4	cubic metres (m <sup>3</sup> )
	cubic feet (ft <sup>3</sup> )	.028317	cubic metres (m <sup>3</sup> )
	cubic yards (yd <sup>3</sup> )	.76455	cubic metres (m <sup>3</sup> )
	acre-feet (ac-ft)	1233.5	cubic metres (m <sup>3</sup> )
		.0012335	cubic hectometres (hm <sup>3</sup> )
		$1.233 \times 10^{-6}$	cubic kilometres (km <sup>3</sup> )
Volume Time			
(Flow)	cubic feet per sec (ft <sup>3</sup> s)	28.317	litres per second (l s)
		.028317	cubic metres per sec (m <sup>3</sup> s)
	gallons per minute (gal min)	.06309	litres per second (l s)
		$6.309 \times 10^{-5}$	cubic metres per sec (m <sup>3</sup> s)
	million gallons per day (mgd)	043813	cubic metres per sec (m <sup>3</sup> s)
Water Usage	acre feet per acre	.3048	cubic metres per square metre (m <sup>3</sup> m <sup>2</sup> )
Mass	pounds (lb)	45359	kilograms (kg)
	tons (short, 2,000 lb)	90718	tonne (t)
		907.18	kilograms (kg)
Power	horsepower (hp)	0.7460	kilowatts (kW)
Pressure	pounds per square inch (psi)	6894.8	pascal (Pa)

\* For greater accuracy, use conversion factors in "Metric Practice Guide"  
(American Society for Testing and Materials E 380-72).

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APPENDIX F: WASTE WATER DATA, which appeared in certain volumes of the Bulletin No. 130 series, has been discontinued. For information regarding waste water, the reader is referred to the recently reactivated Bulletin No. 68 series: "Inventory of Waste Water Production and Waste Water Reclamation Practices in California".	

#### ABSTRACT

The report contains tables showing data on precipitation, surface water flow, ground water levels, and surface and ground water quality in the north coastal area during the 1974-75 water year. Figures show the location of climatological stations, surface water measurement stations, surface water sampling stations, and ground water basins.

#### ACKNOWLEDGMENTS

Valuable assistance and contributions were received from several agencies and many private cooperators. The cooperation of the National Weather Service (formerly the U. S. Weather Bureau) and the U. S. Geological Survey was particularly helpful and is gratefully appreciated.

A special note of thanks is extended to the many loyal and dedicated weather observers whose unselfish efforts have contributed immeasurably to our knowledge of historical weather conditions in the north coastal area.

State of California  
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The Resources Agency  
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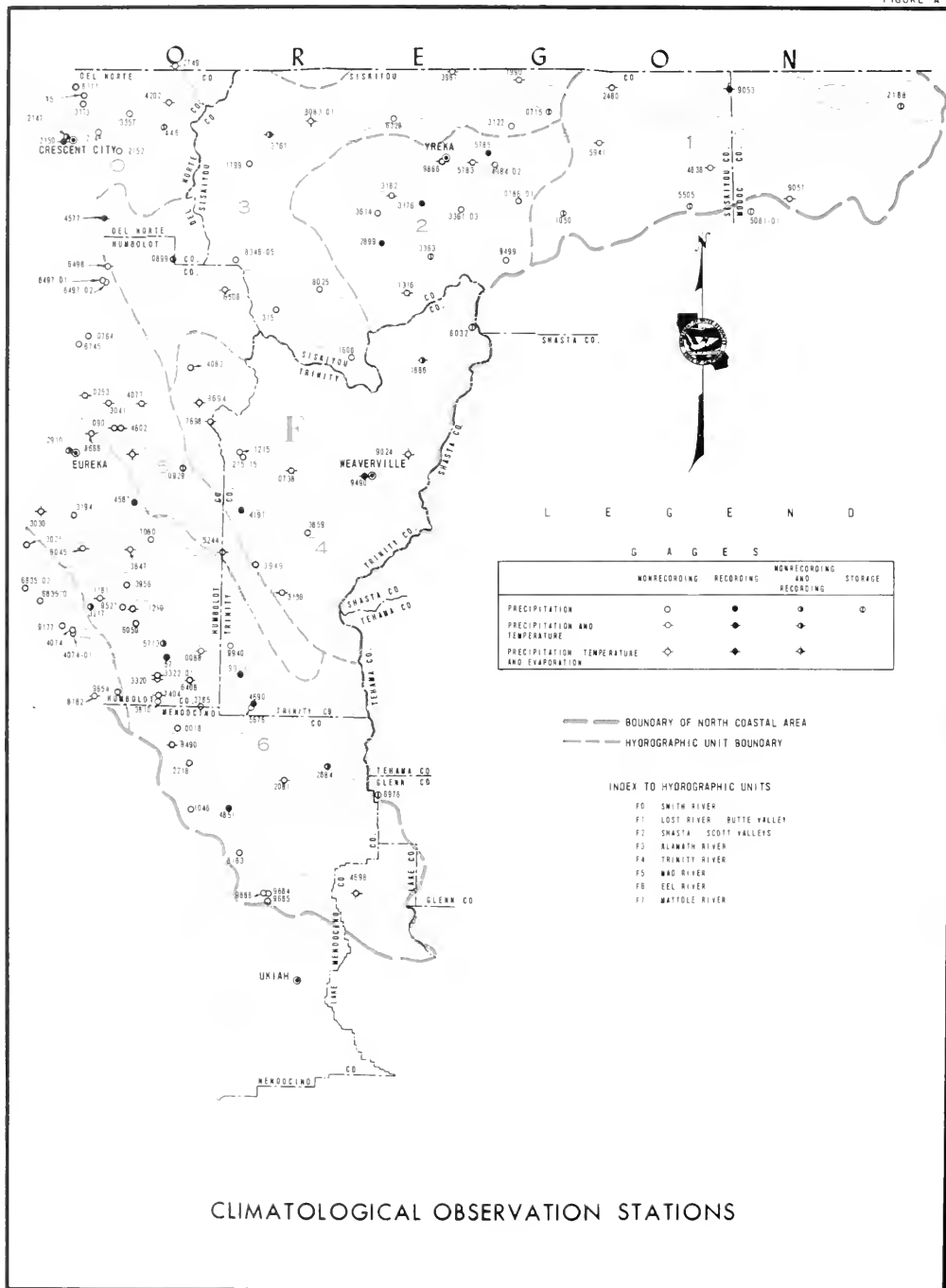
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Water Resources Evaluation Section





## APPENDIX A

### CLIMATOLOGICAL DATA

#### TABLE A-1

#### PRECIPITATION IN NORTH COASTAL AREA DURING WATER YEAR 1975

Table A-1 summarizes monthly precipitation totals for selected stations for the 1975 water year, October 1, 1974, through September 30, 1975. The table shows stations by assigned number, name, and county. Location is defined by latitude and longitude in degrees to the third decimal, and stations are located on the map on the preceding page.

Precipitation values are shown to the nearest hundredth (.01) of an inch. Where digital recording rain gages are used, a zero is shown in the second decimal place, even though these instruments record to only the nearest tenth (.1) of an inch. The following notations are used to qualify the values:

- No record or incomplete record
- B Record began
- E Wholly or partially estimated
- N Record ends
- T Trace, an amount too small to measure

Precipitation data collected by the National Weather Service and local observers and cooperators in the north coastal area are available in greater detail in other reports. The National Weather Service publishes a report entitled "Climatological Data for California" and a companion volume, "Hourly Precipitation Data". Department of Water Resources Bulletin No. 165, "Climatological Stations in California, 1971, Indexed by County", contains station information on both active and historical precipitation measurement stations.

In addition, evaporation data and daily climatologic data, including temperatures, together with local conditions and qualifying remarks, are available in the files of the Department of Water Resources.

The county codes (CO) used in Table A-1 are shown below:

<u>County</u>	<u>Code</u>
Del Norte	08
Glenn	11
Humboldt	12
Lake	17
Mendocino	23
Modoc	25
Siskiyou	47
Trinity	53

TABLE 1

TA	NO	LAT	LONGIT	ELLEV	STATION NAME	TOTAL	JCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOTAL
----	----	-----	--------	-------	--------------	-------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	-----	-----	-----	-------

TABLE A-2

STORAGE GAGE PRECIPITATION DATA

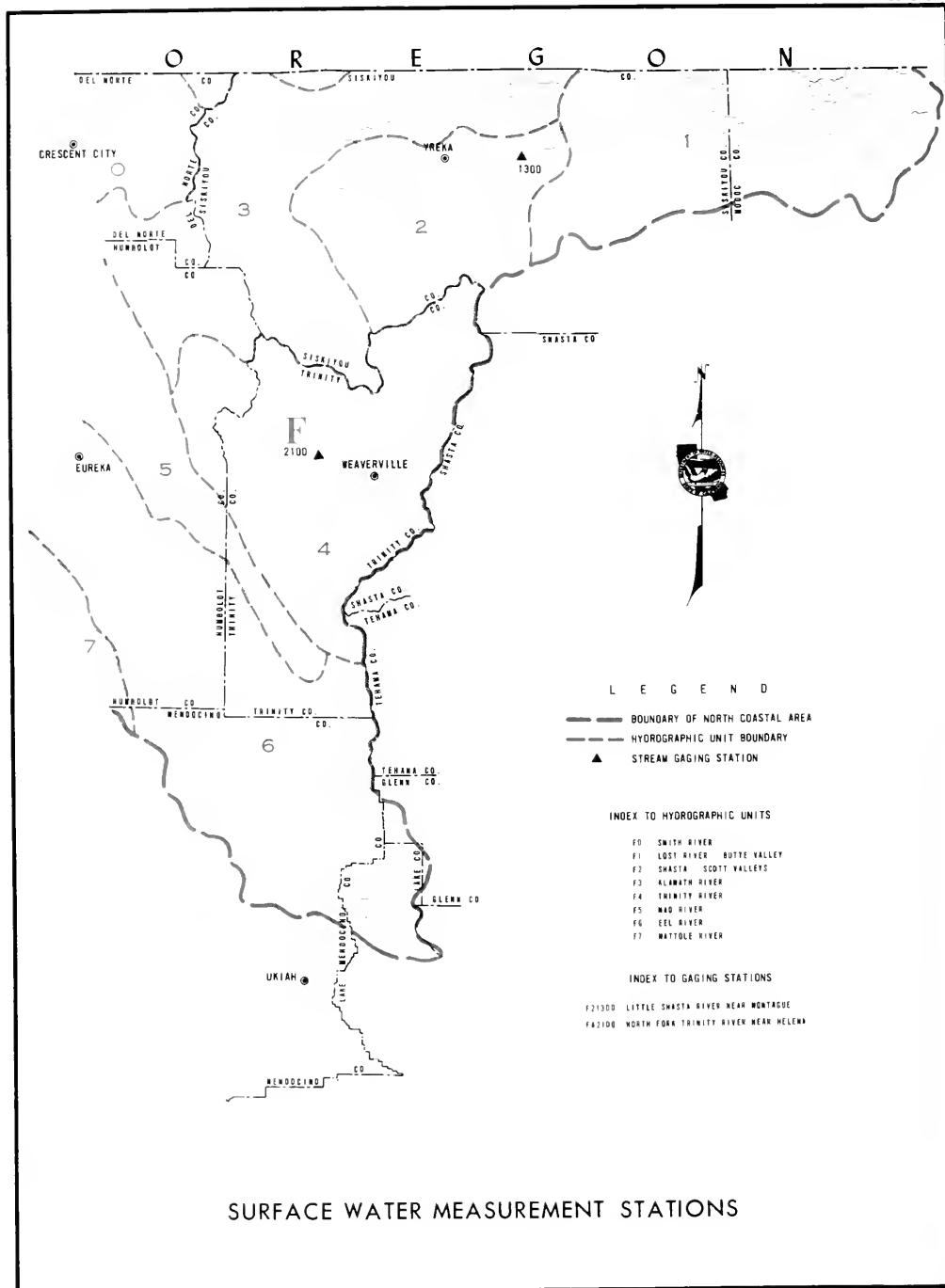
Table A-2 lists storage gages for which the seasonal accumulation of precipitation is reported. These gages are located in the remote mountain regions where no observers are available to operate conventional rain gages. Storage precipitation gages are tanks with capacity for storing an entire year's rainfall, along with antifreeze to melt frozen precipitation and oil to prevent evaporation losses. Once each year, in the summer or early fall, the precipitation that has accumulated since the last measurement is measured and then emptied out. With the addition of the proper amount of oil and antifreeze, the gage is ready to receive the next season's amount. Although logistics preclude conducting the measurement operation exactly at the end of the water year and exactly one year following the previous measurement, data from the gages fairly accurately depict the total precipitation for the water year.

TABLE A-2

STORAGE GAGE PRECIPITATION DATA  
NORTH COASTAL AREA  
(Measurements by the Department of Water Resources)

Station	Station Number	1974-75 Season	
		Measurement Period	Precipitation in Inches
NORTH COASTAL AREA			
<u>SMITH RIVER</u>			
Camp Six Lookout	1446	6-25-74 to 6-11-75	101.28
<u>LOST RIVER-BUTTE VALLEY</u>			
Bray 10 WSW	1050	No data. Gage removed by NWS.	
Crowder Flat	2188	6-19-74 to 6-12-75	19.66
Long Bell Station	5081-01	6-20-74 to 6-12-75	17.08
Medicine Lake	5505	8-29-74 to 8-28-75	43.25
<u>SHASTA-SCOTT VALLEYS</u>			
Gazelle Lookout	3363	6-27-74 to 6-12-75	20.09
<u>KLAMATH RIVER</u>			
Beswick 7S	0715	No data. Gage removed by NWS.	
Blue Creek Mountain	0899	6-24-74 to 6-9-75	121.97
<u>TRINITY RIVER</u>			
Board Camp Mountain	0929	6-25-74 to 6-10-75	No data <sup>1/</sup>
Mumbo Basin	6032	6-22-74 to 8-28-75	72.47
<u>EEL RIVER</u>			
Plaskett	6976	6-3-74 to 6-30-75	71.45

<sup>1/</sup> Vandalism.



## APPENDIX B

### SURFACE WATER MEASUREMENTS

This appendix presents surface water data for the 1975 water year, the period from October 1, 1974 to September 30, 1975. The data consist of summary tables of monthly and annual unimpaired runoff from four major north coastal streams and daily mean discharges at the Department's two north coastal area gaging stations (see Figure B-1).

In addition to data collected and published by the Department of Water Resources in this appendix, the U. S. Geological Survey collects and publishes data from many additional gaging stations for the same report area. This work is done under a federal-state cooperative contract, or through cooperative arrangements with other local or government agencies. Major exportations from the north coastal area, made through the U. S. Bureau of Reclamation's Judge Francis Carr Powerplant and the Pacific Gas and Electric Company's Potter Valley Powerhouse, are shown in the USGS report listed below. The data published in the following reports together with this report present a basis for a comprehensive analysis of the water resources for the area:

1. "Water Resources Data for California  
Part I. Surface Water Records  
Volume 1: Colorado River Basin, Southern Great  
Basin, and Pacific Slope Basins excluding  
Central Valley"  
United States Department of the Interior,  
Geological Survey  
Prepared in cooperation with the California  
Department of Water Resources and with other  
agencies.
2. Bulletin 120, "Water Conditions in California",  
Fall Issue, Department of Water Resources.
3. Bulletin 157, "Index of Stream Gaging Stations in  
and Adjacent to California, 1970". June 1971.  
Department of Water Resources.

TABLE B-1

ANNUAL UNIMPAIRED RUNOFF

Unimpaired runoff is defined as the flow that would occur naturally at a point in a stream if there were: (1) no upstream controls such as dams or reservoirs; (2) no artificial diversions or accretions; and (3) no change in ground water storage resulting from development.



TABLE B-1

## ANNUAL UNIMPAIRED RUNOFF

In Percent of Average

Water Year	Klamath River Copco to Orleans	Salmon River at Somesbar	Trinity River at Lewiston	Eel River at Scotia
Average Annual Runoff*	4,434	1,225	1,227	5,379
1925-26			66	61
1926-27			149	146
1927-28	86	89	86	86
1928-29	57	48	43	35
1929-30	-	63	66	65
1930-31	40	39	33	30
1931-32	76	65	59	67
1932-33	81	83	65	68
1933-34	49	47	56	46
1934-35	81	93	79	84
1935-36	90	93	83	107
1936-37	73	80	81	66
1937-38	179	182	171	200
1938-39	58	62	47	50
1939-40	102	104	131	136
1940-41	100	103	208	153
1941-42	104	108	147	138
1942-43	133	142	90	106
1943-44	62	52	53	42
1944-45	82	92	85	89
1945-46	117	124	115	112
1946-47	58	63	60	49
1947-48	96	101	96	88
1948-49	72	78	69	77
1949-50	92	96	70	77
1950-51	142	147	131	133
1951-52	149	159	148	149
1952-53	146	147	131	133
1953-54	138	131	129	129
1954-55	60	48	60	60
1955-56	186	179	165	190
1956-57	97	97	88	81
1957-58	184	184	219	217
1958-59	77	82	85	77
1959-60	78	77	84	87
1960-61	102	98	99	100
1961-62	74	78	85	73
1962-63	133	140	130	132
1963-64	90	92	85	64
1964-65	161	152	140	175
1965-66	101	91	110	96
1966-67	117	103	135	123
1967-68	76	77	62	79
1968-69	135	133	143	161
1969-70	143	130	130	139
1970-71	192	200	136	148
1971-72	142	148	94	87
1972-73	91	73	113	112
1973-74**	219	226	222	219
1974-75**	121	122	114	134

\* Average annual unimpaired runoff in thousands of acre-feet adjusted to the 50-year period October 1920 through September 1970.

\*\* Preliminary data subject to revision.



TABLE B-2  
MONTHLY UNIMPAIRED RUNOFF  
In Percent of Average

Month		Klamath River Copco to Orleans	Salmon River at Somesbar	Trinity River at Lewiston	Eel River at Scotia
October	Percent	53	53	2	16
1974	Average	86	21	21	55
November	Percent	39	30	32	8
1974	Average	215	55	51	284
December	Percent	44	34	39	31
1974	Average	487	128	99	939
January	Percent	56	59	41	43
1975	Average	655	165	110	1225
February	Percent	111	115	75	208
1975	Average	607	158	149	1176
March	Percent	196	187	173	358
1975	Average	588	158	157	795
April	Percent	117	107	77	111
1975	Average	627	179	217	550
May	Percent	176	162	164	141
1975	Average	587	192	241	239
June	Percent	206	214	217	121
1975	Average	335	108	123	79
July	Percent	176	217	180	132
1975	Average	125	35	36	22
August	Percent	134	164	101	134
1975	Average	67	15	13	10
September	Percent	92	150	100	0
1975	Average	56	10	9	7
1974-75	Percent	121	122	114	134
Water Year	Average	4,434	1,225	1,227	5,379

Note: The percent values are preliminary data subject to revision. Average annual unimpaired runoff in thousands of acre-feet adjusted to the 50-year period October 1920 through September 1970.

TABLE B-3

## DAILY MEAN DISCHARGE

A stream gaging station is named after the stream and the nearest post office. Each of the two gaging stations has been assigned an identification number, the letter and first digit of which denote the hydrographic unit; the remaining digits further identify the stations.

North Coastal Area

F0 - Smith River	F4 - Trinity River
F1 - Lost River-Butte Valley	F5 - Mad River
F2 - Shasta-Scott Valleys	F6 - Eel River
F3 - Klamath River	F7 - Mattole River

The discharges estimated for periods of no record or invalid record are shown with the letter "E". Also qualified by the letter "E" are discharges obtained from extended ratings which exceed 140 percent of the highest measured flow-rate on which the rating curve was based.

The discharge figures in this table have been rounded off as follows:

## 1. Daily flows - cubic feet per second

0.0	- 9.9	nearest Tenth
10	- 999	" Unit
1,000	- 9,999	" Ten
10,000	- 99,999	" Hundred
100,000	- 999,999	" Thousand

## 2. Monthly means - cubic feet per second

0.0	- 99.9	nearest Tenth
100	- 9,999	" Unit
10,000	- 99,999	" Ten
100,000	- 999,999	" Hundred

## 3. Yearly totals - acre-feet

0.0	- 9,999	nearest Unit
10,000	- 99,999	" Ten
100,000	- 999,999	" Hundred
1,000,000	- 9,999,999	" Thousand

**TABLE B-3**  
**DAILY MEAN DISCHARGE**  
(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO	STATION NAME
1975	F21300	LITTLE SHASTA RIVER NEAR MONTAGUE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	5.3	5.3	5.1	6.0	7.5	52	30	52	107	26	13	8.8	1
2	5.3	4.9	5.6	6.0	7.5	43	28	55	106	25	13	8.9*	2
3	5.4	4.9	5.7	6.2	7.2	33	26	59	105	24	12	8.4	3
4	5.4	4.9	7.5	6.2	7.2	31	23	63	101	23	12	8.1	4
5	5.4	4.9	6.0	6.5	7.3	31	21	67	98	22	12	8.0	5
6	5.3	4.9	5.7*	6.7	7.6	33	19	71	93	21	12	8.0	6
7	5.3	5.7	5.8	7.2	12	42	19	77	88	20	12	8.0	7
8	5.3	5.4	5.4	7.2	19	77	20	81	83	20	11	7.8	8
9	5.4	5.2	5.4	7.0	57	48	22	88	79	19	11	7.8	9
10	5.2	5.4	5.0	7.1	28	35	23	92	74	19	11	7.7	10
11	5.2	5.2	7.6	6.7	20	28	22	98	70	18	11	7.8	11
12	5.2	5.1	8.8	6.3	27	23	30	103	67	19	10	7.9	12
13	5.2	4.9	7.0	7.9	42	22	41	110	64	18	10	11	13
14	5.1	4.9	12	8.0	27	21*	40	114	61	18	9.9	12	14
15	5.1	4.9	23	7.8	18	21	35*	122*	59	21	9.7	8.3	15
16	5.0	4.9	13	7.5	15	18	32	127	55	20	9.4	7.8	16
17	4.9	5.2	9.0	7.2	12	15	29	125	52	18	10	7.7	17
18	4.9	6.5	6.7	7.0	13	69	29	124	49	17	12	7.6	18
19	4.9	4.9*	6.6	6.7	14	78	56	120	45	17	10	7.5	19
20	5.0	4.9	9.2	6.7	14	41	50	106	43	17	9.7	7.4	20
21	5.0	5.2	8.3	7.0	9.6	26	55	101	40	16	9.4	7.4	21
22	5.1	5.3	5.9	7.2	10	22	56	99	36	16	9.2	7.3	22
23	5.1	5.2	6.0	7.5	11	22	52	104	33	15	9.2	7.3	23
24	5.0	5.2	6.0	7.8	15	27	62	101	37	15*	8.7	7.3*	24
25	5.0	5.5	6.0	8.0	21	53	52	96	38	15	8.4	7.2	25
26	5.1	5.3	5.9	8.5	25	31	42	95	36*	14	8.3*	7.1	26
27	5.2	5.1	6.0	8.8	43	24	38	98	31	14	8.4	7.0	27
28	6.0	5.3	6.2	8.3	57	21	40	100*	29	14	10	7.0	28
29	5.6	4.8	6.5	8.0	27	44	102	102	28	14	8.9	7.1	29
30	5.3	5.0	6.5	7.8	41	48	104	104	27	14	8.9	7.0	30
31	5.9		6.5	7.8	38		106		13		8.6		31
MEAN	5.2	5.2	7.4	7.2	19.8	35.3	36.1	95.5	61.1	18.2	10.3	7.9	MEAN
MAX	6.0	6.5	23.0	8.8	57.0	78.0	62.0	107	107	26.0	13.0	12.0	MAX
MIN	4.9	4.8	5.0	6.0	7.2	15.0	19.0	52.0	27.0	13.0	8.3	7.0	MIN
AC FT	322	307	456	445	1099	2168	2150	5873	3634	1117	633	472	AC FT

**WATER YEAR SUMMARY**

E - ESTIMATED  
NR - NO RECORD  
\* - DISCHARGE MEASUREMENT OR  
OBSERVATION OF NO FLOW  
# - END \*

MEAN DISCHARGE	MAXIMUM DISCHARGE	DATE	NO	DAY	TIME	MINIMUM DISCHARGE	DATE	NO	DAY	TIME	TOTAL ACRE FEET
25.8	162	2.77	03	18	1745	3.2	0.58	12	10	1430	18675

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD			DATUM OF GAGE		
LATITUDE	LONGITUDE	1 SEC T & R M D B & M	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD	ZERO ON GAGE	REF DATUM	
			CFS	GAGE HT	DATE			FROM	TO		
39° 15' N	121° 05' W	1000	162	2.77	03/18/75	107	10.0	1975	1975		

Station located on Little Shasta River, 1 mile upstream from Montague, CA. Gage is located on the right bank of the river, about 100 feet from the riverbank. The gage is a weir type gage. The discharge is measured by the weir. The gage height is measured by a staff gage. The datum is the same as the station datum.

# - Irrigation channel only.



**TABLE B-3 (CONT.)**  
**DAILY MEAN DISCHARGE**  
(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO	STATION NAME
1975	F42100	TRINITY RIVER NORTH FORK NEAR HELINA

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	27	31*	42	49	219	1,670	1,350	478	1,180	241	87	49	1
2	28	33	80	91	221	2,060	1,170	1,070	1,230	236	82	46	2
3	28	33	236	44	209	1,670	1,040	1,190	1,080	231	85	44	3
4	28	32	340	237	214	1,300	440	1,040	1,040	251	85	42	4
5	27	32	156*	536	422	1,070	857	864	1,140	266	83	40	5
6	27	31	116	84*	226	461	763	797	1,010	258	76	38	6
7	27	48	98	883*	293	1,110	708	822	916	259	72	37	7
8	27	55	89	1,680	517	1,630	658	1,000	787	279	69	36	8
9	27	40	79	887	1,490	1,380	633	1,230	720	277	68	36	9
10	27	45	71	684	1,250	1,110	676	1,310	733	294	68	36	10
11	27	40	124	600	910	916	737	1,290	740	302	68	36*	11
12	27	36	278	492	1,240	401	434	1,250	750	301	68	35	12
13	27	35	286	423	1,170	721	1,010	1,440	722	273	67	34	13
14	28	34	318	382	1,400*	645	1,740*	1,460*	794	249	66	37	14
15	28	34	417	359	491	619	933	1,440	773	237	63	36	15
16	27	33	289	342	749	586	405	1,540	648	247	61	35	16
17	27	35	213	341	635	401	713	1,440	511	205	62	34	17
18	27	80	167	371	566	1,320	672	1,610	417	192	89	33	18
19	27	55	139	393	1,130	2,070	712	2,570	380	140	78	32	19
20	27	46	136	418	1,440	1,513	805	1,200	356	194	64	32	20
21	27	77	151	404	1,010	1,250	847	985	371	194	63	31	21
22	27	106	133	396	794	1,060	874	931	362	183	61	30	22
23	27	62	118	387	668	976	863	1,070	340*	185*	57	30	23
24	27	54	106	422	702	1,170	1,460	1,160	306	163	58	29	24
25	28	68	96	457	806	2,430	1,420	1,077	263	145	56	29	25
26	28	60	95	432	835	1,440	1,080	1,080	242	137	54	28	26
27	33	54	134	381	1,010	1,420	914	1,110*	247	132	54	28	27
28	71	50	115	317	1,530	1,220	442	1,160	250	134	62*	28	28
29	50	46	100	278	1,130	1,130	460	1,250	251	130	60	28	29
30	37	44	107	247	1,330	1,330	919	1,360	246	114	55	28	30
31	36		92	246	1,550			1,460*		97	52		31
MEAN	30.2	47.8	158	455	827	1,265	904	1,233	635	211	67.6	34.6	MEAN
MAX	71.0	106	417	1,640	1,770	2,550	1,420	1,960	1,380	302	89.0	49.0	MAX
MIN	27.0	31.0	42.0	91.0	209	586	633	427	242	97.0	52.0	28.0	MIN
AC FT	1857	2842	9765	27987	45953	77404	53810	75818	37795	13000	4159	2057	AC FT

**WATER YEAR SUMMARY**

MEAN	DISCHARGE	MAXIMUM	GAGE HT	MO	DAY	TIME	DISCHARGE	GAGE HT	MO	DAY	TIME	TOTAL
487.4	2850	11.57	66	1	0515		274	4.47	10	1	0000	352845

E - ESTIMATED  
NR - NO RECORD  
\* - DISCHARGE MEASUREMENT OR  
OBSERVATION OF NO FLOW  
# - E AND \*

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD			DATUM OF GAGE			
LATITUDE	LONGITUDE	14 SEC T & R M D B & M	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD	FROM	TO	ZERO ON GAGE	REF DATUM
			CFS	GAGE HT	DATE							

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## APPENDIX C

### GROUND WATER MEASUREMENTS

This appendix contains ground water level measurements from 61 wells for the period October 1, 1974 through September 30, 1975. It also contains a table which summarizes the measurements. Wells in the network are continuously reviewed and, when conditions dictate, replacement wells are located and measured.

There are nine ground water basins in the North Coast Region for which data are reported.

Two numbering systems are used by the Department to facilitate the processing of water level measurement data. The two systems are the Region and Basin Designation and the State Well Numbering System as described below.

The regions are those of the California Regional Water Quality Control Boards whose geographic areas are defined in Section 13200 of the Water Code. That portion of Northern California covered by this report is included in the North Coast Region. A decimal system of the form 0-00.00 has been selected according to geographic regions, ground water basins, and subbasins or subareas as follows:

	1	-	01	00
Region (North Coast Region)	_____			
Ground Water Basin (Smith River Basin)	_____			
Subbasin or Subarea (Subbasins or subareas have not been defined in the North Coast Region)	_____			

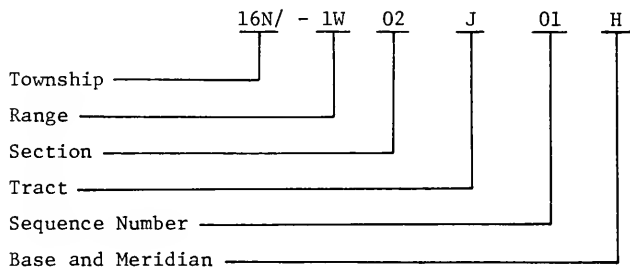
The State Well Numbering System is based on township, range, and section subdivisions of the Public Land Survey.

A section is divided into 40-acre tracts as follows:

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Sequence numbers in a tract are generally assigned in chronological order.

The number of a well, assigned in accordance with this system, is referred to as the State Well Number, as illustrated below:



This number identifies and locates the well. In the example, the well is in Township 16 North, Range 1 West, Tract J of Section 2, located in the Humboldt Base and Meridian.

TABLE C-1

AVERAGE CHANGE OF GROUND WATER LEVELS  
AND SUMMARY OF WELL MEASUREMENTS REPORTED  
NORTH COASTAL AREA

:	:	Average	:	:	:
:	:	Change	:	:	Number of
:	<u>Ground Water Basin</u>	Spring 1974	:	Measuring	<u>Wells Reported</u>
:	:	to	:	Agency	:
:	:	Spring 1975	:	:	Fall Spring
:	Name	in feet	:	:	1974 1975
:	Number	:	:	:	:
:	:	:	:	:	:

## NORTH COASTAL REGION

Smith River Plain	1-01.00	-0.9	DWR	8	8
Butte Valley	1-03.00	+1.8	DWR	15	13
Shasta Valley	1-04.00	-0.2	DWR	9	8
Scott River Valley	1-05.00	-0.7	DWR	5	5
Mad River Valley	1-08.00	-0.9	DWR	2	3
Eel River Valley	1-10.00	-1.5	DWR	7	6
Round Valley	1-11.00	-0.9	DWR	4	7
Laytonville Valley	1-12.00	-0.4	DWR	3	4
Little Lake Valley	1-13.00	-1.4	DWR	5	5

DWR - Department of Water Resources

TABLE C-2  
GROUND WATER LEVELS AT WELLS

An explanation of the column headings and the code symbols follows:

State Well Number - Refer to the explanation presented on page 17.

Ground Surface Elevation - The numbers in this column are the elevation in feet above mean sea level (USGS datum) of the ground surface at the well. Elevations are usually taken from topographic maps and the accuracy is controlled by topographic standards.

Date - The date shown in the column is the date when the depth measurement given in the next column was made.

Ground Surface to Water Surface - This is the measured depth in feet from the ground surface to the water surface in the well; some of the depth measurements in the column may be preceded by a number in parentheses to indicate a questionable measurement. The code applicable to these "questionable measurements" is as follows:

- |                                      |  |
|--------------------------------------|--|
| (1) Pumping                          | (6) Other                              |
| (2) Nearby pump operating            | (7) Recharge operation at or near well |
| (3) Casing leaking or wet            | (8) Oil in casing                      |
| (4) Pumped recently                  | (9) Caved or deepened measurement      |
| (5) Air or pressure gage measurement |  |

When a measurement was attempted, but could not be obtained, then only a number in parentheses is shown in the column. The code applicable to these "no measurements" is as follows:

- |                               |                               |
|-------------------------------|-------------------------------|
| (1) Pumping                   | (6) Well has been destroyed   |
| (2) Pump house locked         | (7) Special                   |
| (3) Tape hung up              | (8) Casing leaking or wet     |
| (4) Cannot get tape in casing | (9) Temporarily inaccessible  |
| (5) Unable to locate well     | (0) Measurements discontinued |

The words FLOW and DRY are shown in this column to indicate a flowing or dry well, respectively. A minus sign preceding the number in this column indicates that the static water level in the well is this distance in feet above the ground surface.

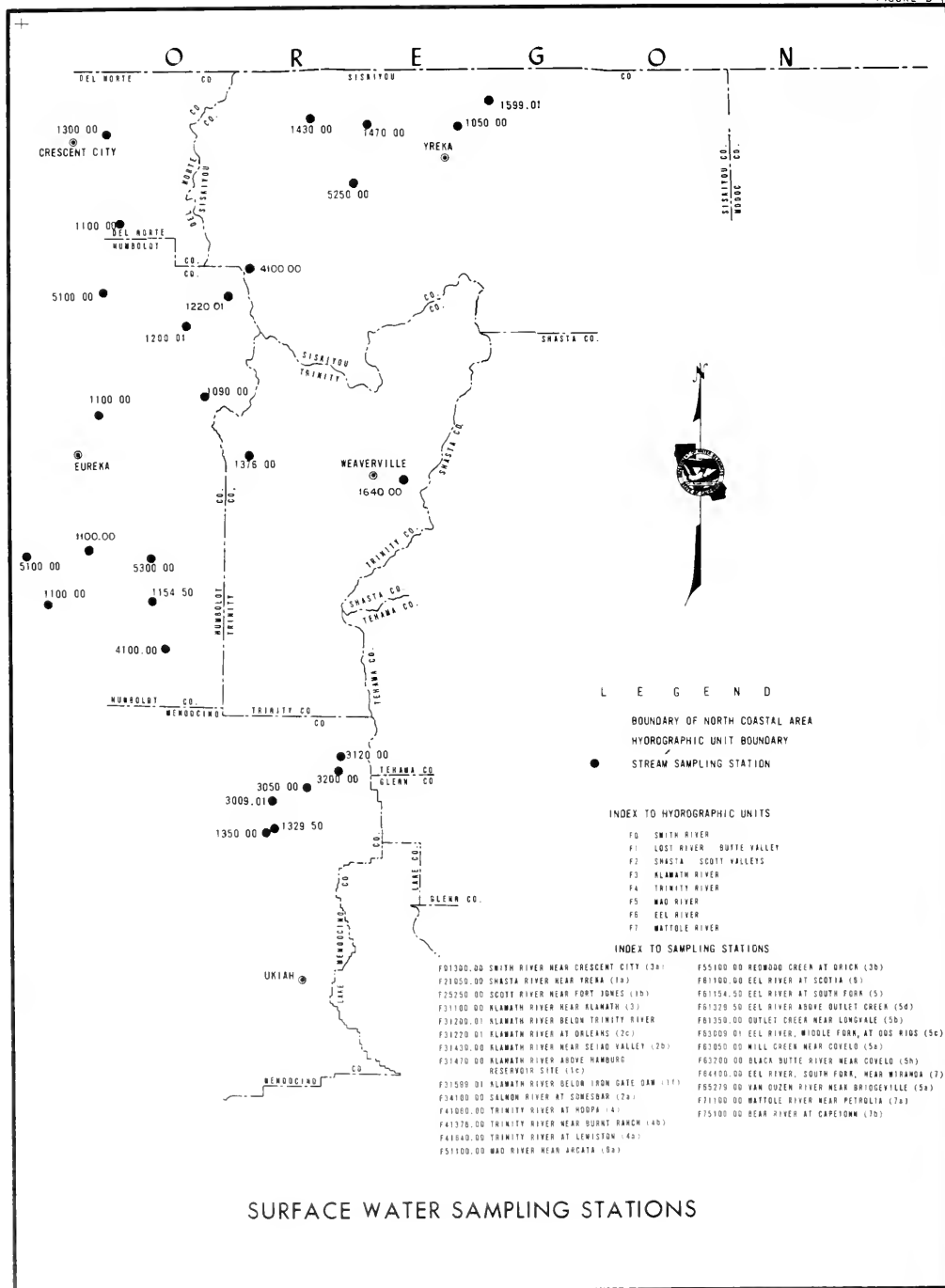
Water Surface Elevation - This is the elevation in feet above mean sea level (USGS datum) of the water surface in the well. It was derived by subtraction of the depth measurement from the ground surface elevation.

Agency Supplying Data - Each of these numbers is the code number for the agency supplying data for that measurement. The Department of Water Resources is the sole agency supplying ground water level measurement data for this report. It has been assigned an agency code number of 5050.

**TABLE C-2**  
**GROUND WATER LEVELS AT WELLS**

**NORTH COASTAL AREA**

WELL NUMBER	DATE	GROUND SURF ELEVATION (FEET)	WATER LEVEL ELEVATION (FEET)	WATER DEPTH (FEET)	WELL TYPE
<b>SMITH RIVER PLAIN 1-01.00</b>					
16R/01W-02301M	11-10-74 4-28-75	28.0 17.2	99.0 109.8	50.0 50.0	
16R/01W-17601M	11-10-74 4-28-75	22.6 12.2	25.4 35.8	50.0 50.0	
17R/01W-02701M	11-10-74 4-28-75	21.0 16.8	10.0 14.2	50.0 50.0	
17R/01W-03801M	11-10-74 4-28-75	13.1 9.8	0.9 4.2	50.0 50.0	
17R/01W-15802M	11-10-74 4-28-75	16.6 9.0	4.4 12.0	50.0 50.0	
17R/01W-20001M	11-10-74 4-28-75	6.0 1.9	9.0 13.1	50.0 50.0	
17R/01W-27005M	11-10-74 4-28-75	20.5 11.5	19.5 28.5	50.0 50.0	
18R/01W-27703M	11-10-74 4-28-75	8.3 5.3	6.7 9.7	50.0 50.0	
<b>BUTTE VALLEY 1-03.00</b>					
45R/01E-01201M	11-06-74 4-17-75	161.7 161.3	4226.3 4226.7	50.0 50.0	
45R/01E-06A01M	11-06-74 4-17-75	27.5 24.8	4230.5 4233.2	50.0 50.0	
45R/01E-11P01M	11-06-74 4-17-75	40.0 36.5	4235.0 4238.5	50.0 50.0	
46R/01E-06N01M	11-06-74 4-17-75	23.2 17.5	4218.8 4224.5	50.0 50.0	
46R/01E-17B01M	11-06-74 4-17-75	38.6 29.8	4207.4 4216.2	50.0 50.0	
46R/01E-18Q01M	11-06-74 4-17-75	23.2 14.7	4223.8 4232.3	50.0 50.0	
46R/02E-25K02M	11-06-74 4-17-75	25.5 23.0	4230.5 4233.0	50.0 50.0	
46R/02W-26Q01M	11-06-74 4-17-75	14.8 11.2	4239.2 4242.8	50.0 50.0	
47R/01E-06A02M	11-06-74 4-17-75	32.3 29.3	4212.2 4215.2	50.0 50.0	
47R/01E-20Q01M	11-06-74 4-17-75	24.2 21.8	4235.8 4238.2	50.0 50.0	
47R/01W-04Q01M	11-06-74 4-17-75	6.8 (9)	4234.7 4237.2	50.0 50.0	
47R/01W-04Q02M	11-06-74 4-17-75	7.3 (9)	4234.2 4237.2	50.0 50.0	
47R/01W-39L01M	11-06-74 4-17-75	4.7 1.6	4233.3 4236.4	50.0 50.0	
47R/01W-27B01M	11-06-74 4-17-75	8.0 4.8	4225.0 4228.2	50.0 50.0	
47R/01W-34Q01M	11-06-74 4-17-75	19.0 15.8	4218.0 4223.2	50.0 50.0	
<b>SHASTA VALLEY 1-04.00</b>					
42R/05W-02Q01M	10-15-74	6.6 6.1	2875.4 2875.9	50.0 50.0	
42R/05W-10Q01M	10-15-74	9.8 3.0	2825.2 2832.0	50.0 50.0	
43R/05W-11A01M	11-07-74	126.0 125.4	2814.0 2814.4	50.0 50.0	
43R/05W-15P01M	10-15-74	13.3 8.7	2849.7 2856.3	50.0 50.0	
43R/05W-22A01M	11-07-74	17.0 6.6	2844.0 2858.4	50.0 50.0	
43R/05W-33C01M	10-15-74	45.0 42.8	2765.0 2767.2	50.0 50.0	
44R/05W-34A01M	10-15-74	26.5 27.1	2810.5 2809.9	50.0 50.0	
44R/05W-10F01M	10-15-74	13.6 26.8	2523.4 2530.2	50.0 50.0	
44R/05W-19D01M	10-15-74	21.5	2516.5	50.0	
<b>SCOTT RIVER VALLEY 1-05.00</b>					
42R/05W-02A02M	2748.0	10-15-74 4-18-75	10.4 4.8	2735.4 2741.2	50.0 50.0
42R/05W-27N01M	2743.0	10-15-74 4-18-75	5.4 2.9	2821.6 2827.1	50.0 50.0
43R/05W-23P01M	2728.0	10-15-74 4-18-75	5.8 3.0	2722.2 2725.0	50.0 50.0
43R/05W-24P01M	2735.0	10-15-74 4-18-75	5.5 3.5	2729.5 2731.5	50.0 50.0
44R/05W-28P01M	2711.0	10-15-74 4-18-75	14.6 3.5	2696.4 2707.5	50.0 50.0
<b>SAD RIVER VALLEY 1-08.00</b>					
06R/01E-07H01M	11.0	11-11-74 4-29-75	9.5 3.4	1.5 7.6	50.0 50.0
06R/01E-17B01M	23.0	11-11-74 4-29-75	13.8 6.7	9.2 16.3	50.0 50.0
06R/01E-19Q01M	19.0	11-11-74 4-29-75	10.5 (0)	8.5 (0)	50.0 50.0
06R/01E-24P01M	25.0	11-11-74	(0)	(0)	50.0
<b>EEL RIVER VALLEY 1-10.00</b>					
02R/01W-08B01M	34.0	11-11-74 4-29-75	22.7 13.5	11.3 20.5	50.0 50.0
03R/01W-18D01M	15.0	11-11-74 4-29-75	5.2 3.3	9.8 11.7	50.0 50.0
03R/01W-30N01M	19.0	11-11-74 4-29-75	17.0 12.5	2.0 6.5	50.0 50.0
03R/01W-34J01M	53.0	11-11-74 4-29-75	35.4 31.2	17.6 21.8	50.0 50.0
03R/02W-13T01M	10.0	11-11-74 4-29-75	7.1 4.3	2.9 5.7	50.0 50.0
03R/02W-26R01M	12.0	11-11-74 4-29-75	10.4 (0)	1.6 (0)	50.0 50.0
03R/02W-35M02M	13.0	11-11-74 4-29-75	10.4 7.0	2.6 6.0	50.0 50.0
<b>ROUND VALLEY 1-11.00</b>					
22R/12W-04B01M	1351.0	11-11-74 4-24-75	14.5 6.6	1334.5 1344.4	50.0 50.0
22R/12W-06F02M	1395.0	4-24-75	2.9	1392.1	50.0
22R/12W-08L01M	1370.0	11-11-74 4-24-75	4.5 -10.0	1365.5 1380.0	50.0 50.0
22R/13W-01N01M	1420.0	4-24-75	5.0	1415.0	50.0
22R/13W-12R01M	1400.0	11-11-74 4-24-75	30.1 6.0	1369.9 1394.0	50.0 50.0
23R/12W-28N02M	1374.0	4-24-75	8.0	1368.0	50.0
23R/13W-36C01M	1410.0	11-11-74 4-24-75	28.7 8.9	1381.3 1401.1	50.0 50.0
<b>LAYTONVILLE VALLEY 1-12.00</b>					
21R/13W-10M01M	1688.0	11-11-74 4-24-75	17.3 4.9	1670.7 1683.1	50.0 50.0
21R/13W-01L02M	1687.0	11-11-74 4-24-75	(2) 6.8	(0) 1675.2	50.0 50.0
21R/13W-12M02M	1610.0	11-11-74 4-24-75	17.5 3.7	1612.5 1626.3	50.0 50.0
21R/13W-24A01M	1653.0	11-11-74 4-24-75	13.5 0.0	1639.3 1653.0	50.0 50.0
<b>LITTLE LAKE VALLEY 1-13.00</b>					
18R/13W-08L01M	1340.0	11-11-74 4-24-75	9.2 0.5	1330.8 1339.5	50.0 50.0
18R/13W-17J01M	1370.0	11-11-74 4-24-75	29.0 14.7	1341.0 1355.3	50.0 50.0
18R/13W-18P01M	1365.0	11-11-74 4-24-75	20.4 18.5	1344.6 1364.5	50.0 50.0
19R/13W-32P01M	1347.0	11-11-74 4-24-75	11.9 6.4	1333.1 1340.6	50.0 50.0
19R/13W-32L02M	1350.0	11-11-74 4-24-75	12.5 8.5	1337.5 1341.5	50.0 50.0



## APPENDIX D

### SURFACE WATER QUALITY

This appendix presents surface water quality data collected during the period from October 1, 1974, through September 30, 1975. The data were collected from 25 stream stations in the north coastal area.

At the time of field sampling, dissolved oxygen, pH, and temperature measurements are made and gage height and time are noted. Comments on local conditions are noted in field books which are available in the files of the Department of Water Resources. The mineral constituents were determined in accordance with methods described in "Standard Methods for the Examination of Water and Waste Water", prepared and published jointly by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation, 13th Edition, 1971.

Each station in this appendix has been assigned a station number. The numbering system is described in Appendix B, "Surface Water Measurements".





TABLE D-1  
SAMPLING STATION DATA AND INDEX  
North Coastal Area

Station	Station Number	Location*	Beginning of Record	Frequency of Sampling	Analyses on Page
BEAR RIVER AT CAPETOWN	F75100.00	01N/05W-15 H	MAY 1966	Annually	3*
BLACK BUTTE RIVER NEAR COVELL	F33000.00	23N/11W-26 M	NOV. 1966	Monthly	3*, 37, 43
EEL RIVER ABOVE OUTLET CREEK NEAR LOS RIOS	F13000.00	21N/15W-30 M	APR. 1968	Monthly	3, 37, 43
EEL RIVER AT SCOTIA	F11000.00	11N/01E-10 H	APR. 1961	Monthly	3*, 37, 41, 43
EEL RIVER AT SOUTH FORK	F11544.00	01S/02E-26 H	APR. 1961	Monthly	3*, 37, 41
EEL RIVER, MIDDLE FORK, AT LOS RIOS	F30000.01	21N/13W-10 M	APR. 1968	Monthly	31, 37, 43
EEL RIVER, SOUTH FORK, NEAR MIRANDA	F14100.00	13S/04E-30 H	APR. 1961	Monthly	34, 37, 43
KLAMATH RIVER ABOVE HAMBURG RESERVOIR SITE	F31470.00	40N/10W-10 M	DEC. 1968	Bimonthly	2*
KLAMATH RIVER AT ORLEANS	F31220.01	11N/08E-31 H	JAN. 1964	Monthly	2*, 37, 41
KLAMATH RIVER BELOW IRON GATE DAM	F31599.01	47N/08W-20 M	DEC. 1961	Monthly	2*, 37, 41, 43
KLAMATH RIVER NEAR KIAMATH	F31100.00	13N/02E-10 H	APR. 1961	Monthly	27, 29, 37, 41, 43
KLAMATH RIVER NEAR SEIAD VALLEY	F31430.00	40N/12W-03 M	DEC. 1968	Monthly	2*, 37, 41
MAT RIVER NEAR ARCATA	F51100.00	00N/01E-15 H	NOV. 1968	Bimonthly	31, 37, 41
MATTOLE RIVER NEAR PETROLIA	F71100.00	00S/02W-11 H	JAN. 1969	Annually	3*
MILL CREEK NEAR COVELL	F30000.00	20N/12W-05 M	FEB. 1966	Monthly	34, 37, 43
OUTLET CREEK NEAR LONGVALE	F61340.00	20N/14W-01 M	MAY 1966	Monthly	31, 37, 43
REDWOOD CREEK AT ORICK	F55100.00	10N/01E-04 H	NOV. 1968	Monthly	31, 37, 41
SALMON RIVER AT SOMENBAR	F34100.00	11N/06E-03 H	NOV. 1968	Semiannually	3
SCOTT RIVER NEAR FORT JONES	F05000.00	44N/10W-28 M	DEC. 1968	Bimonthly	27, 37, 41, 43
SHASTA RIVER NEAR YREKA	F21000.00	40N/07W-24 M	DEC. 1968	Bimonthly	27, 37, 41, 43
SMITH RIVER NEAR CRESCENT CITY	F01300.00	16N/01E-10 H	APR. 1961	Monthly	27, 37, 41, 43
TRINITY RIVER AT HOOPA	F41000.00	08N/04E-25 H	APR. 1961	Monthly	31, 37, 41, 43
TRINITY RIVER AT LEWISTON	F41000.00	33N/08W-17 M	APR. 1961	Bimonthly	34, 37, 41, 43
TRINITY RIVER NEAR BURNT RANCH	F41370.00	05N/07E-19 H	APR. 1968	Bimonthly	3, 37, 41, 43
VAN DUZEN RIVER NEAR BRIDGEVILLE	F41270.00	11N/02E-12 H	APR. 1968	Monthly	31, 39, 43, 45

# TABLE D-2

## MINERAL ANALYSES OF SURFACE WATER

### Lab and Sampler Agency Code

5050 - Department of Water Resources

### Abbreviations

<u>TIME</u>	- Pacific Standard Time on a 24-hour clock
<u>G.H.</u>	- Instantaneous gage height in feet above an established datum
<u>Q</u>	- Instantaneous discharge measured in cubic feet per second (cfs). "E" indicates the value has been estimated.
<u>DEPTH</u>	- Depth at which sample was collected
<u>DO</u>	- Dissolved oxygen content in milligrams per liter
<u>SAT</u>	- Percent of normal dissolved oxygen saturation
<u>TEMP</u>	- Water temperature in degrees Fahrenheit (F) and Celsius (C)
<u>PH</u>	- Measure of acidity or alkalinity of water
<u>EC</u>	- Electrical conductance in micromhos at 25° C.
<u>TDS</u>	- Gravimetric determination of total dissolved solids at 180° C.
<u>SUM</u>	- Total dissolved solids by summation of analyzed constituents
<u>TH</u>	- Total hardness
<u>NCH</u>	- Noncarbonate hardness - any excess of total hardness over total alkalinity
<u>TURB</u>	- Jackson Turbidity Units measured with a Hellige Turbidimeter (E) or a Hach Nephelometer (A). Field determination (F).
<u>SAR</u>	- Sodium adsorption ratio
<u>PERCENT REACTANCE VALUE</u>	- Determined by dividing the sum of the cations or anions in milliequivalents per liter into each constituent in milliequivalents per liter arriving at a percentage. For a partial analysis, an approximate value is determined by multiplying the electrical conductance by 0.01 and using that as the cation or anion sum.

### Mineral Constituents

B	- Boron	K	- Potassium
CA	- Calcium	MG	- Magnesium
CL	- Chloride	NA	- Sodium
CO <sub>3</sub>	- Carbonate	NO <sub>3</sub>	- Nitrate
F	- Fluoride	SI0 <sub>2</sub>	- Silica
HCO <sub>3</sub>	- Bicarbonate	S0 <sub>4</sub>	- Sulfate

TABLE D-2  
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE LAB	G.P. J	DO SAT	TEMP	FIELD LABORATORY PH	EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	R	F	TDS CUM	TH CUM	TURB SAB
*****																				
F1 1306.00 SMITH RIVER NEAR CRESCENT CITY																				
10/02/74	5-50		9.7	57.2F	7.8	159	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
0650		205	94	14.0C																
11/13/74	5-50		11.4	50.0F	7.6	144	--	--	--	--	--	--	--	--	--	--	--	--	--	04F
0915		271	101	1.0C																
12/03/74	5-50		10.9	46.2F	7.8	118	--	--	--	--	--	--	--	--	--	--	--	--	--	34F
0820		2240	94	9.0C																
01/07/75	5-50		11.7	46.4F	7.3	77	--	--	--	--	--	--	--	--	--	--	--	--	--	134F
0745		11600	99	8.0C																
02/19/75	5-50		12.6	46.2F	7.4	70	--	--	2.0	--	0	39	--	1.3	--	20	--	33	17A	
0810		14200	109	7.0C	7.4	72			0.09		0.0	0.04		0.4				0.2		
03/11/75	5-50		11.9	43.7F	7.4	81	--	--	--	--	--	--	--	--	--	--	--	--	--	24F
0720		5660	97	6.5C																
04/15/75	5-50		12.41	42.8F	7.2		--	--	1.5	--	0	50	--	1.5	--	0.0	--	39	1A	
0700		3400	94	7.0C	7.7	44			0.07		0.0	0.82		0.4				0.1		
05/13/75	5-50		10.9	5.0F	7.4	78	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
0720		4300	97	1.0C																
06/10/75	5-50		9.3	6.8F	7.4	107	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
0620		114	94	16.0C																
07/07/75	5-50		9.5	66.2F	6.1	126	--	--	--	--	--	--	--	--	--	--	--	--	--	04F
1700		670	102	15.0C																
08/11/75	5-50		9.2	64.0F	6.2	144	--	--	--	--	--	--	--	--	--	--	--	--	--	04F
1615		312	103	21.0C																
09/02/75	5-50		7.03	10.1	64.4F	6.1	144	--	--	2.6	--	0	80	--	2.5	--	0.0	--	70	0A
1615		300	105	16.0C	6.2	144			0.11		0.0	1.31		0.7				0.1		
F2 1029.00 SHASTA RIVER NEAR YDEKA																				
11/08/74	5-50		2.21	11.4	46.4F	6.2	507	--	--	--	--	--	--	--	--	--	--	--	--	34F
0740		200	103	8.0C																
01/15/75	5-50		3.37	11.9	34.2F	6.2	568	--	--	4.2	--	7.0	314	--	24	--	0.0	--	251	1A
0945		262	97	4.0C	6.4	570			1.83		0.23	5.15		0.6				1.2		
03/18/75	5-50		6.42	10.5	42.0F	6.2	335	21	22	23	3.5	0	148	14	8.7	5.7	3.0	--	913	140A
1250		140	9	6.0C	7.0	362	1.05	1.01	1.00	0.54	0.0	3.25	0.29	0.25	0.09			196	0	0.6
05/05/75	5-50		3.42	10.4	53.0F	6.2		--	--	3.2	--	0	310	--	1.7	--	0.0	--	246	1A
1220		280	101	12.0C	6.3	517			1.39		0.0	5.08		0.6				0.9		
07/17/75	5-50		3.19	7.3	76.0F	6.2	534	--	--	--	--	--	--	--	--	--	--	--	--	34F
1520		112	94	26.0C																
09/18/75	5-50		3.60	9.4	64.4F	6.4	605	--	--	--	--	--	--	--	--	--	--	--	--	24F
1030		63	101	16.0C																
F2 529.00 SCOTT RIVER NEAR FORT JONES																				
11/08/74	5-50		3.35	12.7	46.4F	7.4	142	--	--	--	--	--	--	--	--	--	--	--	--	24F
1100		164	117	8.0C																
01/15/75	5-50		6.42	14.8	61.0F	7.4	211	--	--	--	--	--	--	--	--	--	--	--	--	34F
1245		148	94	5.0C																
05/05/75	5-50		7.03	10.4	51.0F	7.0		--	--	2.6	--	0	105	--	1.1	--	0.0	--	84	7A
1635		138	99	11.0C	6.2	176			0.11		0.0	1.72		0.3				0.1		
07/17/75	5-50		6.47	4.4	71.0F	6.0	201	--	--	--	--	--	--	--	--	--	--	--	--	34F
1625		433	112	22.0C																
09/17/75	5-50		5.36	11.4	64.0F	6.4	310	--	--	--	--	--	--	--	--	--	--	--	--	14F
1535		86	141	21.0C																
F3 1100.00 KLAMATH RIVER NEAR KLAMATH																				
10/02/74	5-50		8.7	60.0F	4.1	224	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
0830		2850	44	16.0C																
11/13/74	5-50		10.1	5.0F	7.0	212	--	--	--	--	--	--	--	--	--	--	--	--	--	44F
1000		5120	9	1.5C																
12/02/74	5-50		10.7	46.4F	6.1	204	--	--	--	--	--	--	--	--	--	--	--	--	--	64F
1530		5500	91	8.0C																

TABLE D-2 cont  
MINERAL ANALYSES OF SURFACE WATER

[illegible]

TABLE D-2 cont  
MINERAL ANALYSES OF SURFACE WATER

[illegible]

TABLE D-2 cont  
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE L-#	TEMP G	NO SAT	TEMP	FIELD LABORATORY PH EC		MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER					TURB SA#
					CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F	TDS SUM	TH NCH					
F3 -100.00 SALMON RIVER AT SOMESBAR																						
10/01/74 1115	5:50	34.2 177	10.3 105	6.1BF 14.0C	7.9	149	--	--	--	--	--	--	--	--	--	--	--	--	--	1AF		
06/09/75 1035	5:50	7.07 440F	11.1 103	53.8F 12.0C	7.4	54	--	--	--	--	--	--	--	--	--	--	--	--	--	6AF		
F4 100.00 TRINITY RIVER AT MOORA																						
10/01/74 0930	5:50	13.34 505	10.4 102	6.8BF 16.0C	8.3	203	--	--	--	--	--	--	--	--	--	--	--	--	--	1AF		
11/12/74 1100	5:50	13.02 769	11.2 101	51.9F 11.5C	7.9	209	--	--	--	--	--	--	--	--	--	--	--	--	--	1AF		
12/02/74 1100	5:50	14.04 811	11.3 96	46.4F 8.0C	8.1	208	--	--	--	--	--	--	--	--	--	--	--	--	--	1AF		
01/06/75 1215	5:50	12.14 1530	12.5 101	42.8F 6.0C	7.6	122	--	--	2.8 12 9	--	0 400	67 1.10	--	2.1 406	--	1.0 --	--	--	--	81 84A 0.2		
02/19/75 1314	5:50	14.25 872	12.0 104	44.6F 7.0C	7.4	151	--	--	--	--	--	--	--	--	--	--	--	--	--	44AF		
03/10/75 1020	5:50	22.21 10107	11.1 94	44.4F 8.0C	8.4	131	--	--	--	--	--	--	--	--	--	--	--	--	--	110AF		
03/12/75 1050	5:50	11.05 800E	11.5 94	46.5F 4.0C	7.5	141	17 85 59	5.5 45 31	2.6 11 8	7 102 1	0 400	75 1.23 84	4.8 1.0 7	1.4 1.05 4	.2 1.00	1.0 --	--	--	82 70 65 85A 4 0.1			
04/14/75 1005	5:50	14.08 890	10.9 95	46.2F 9.0C	7.6	148	--	--	2.2 10 7	--	0 400	83 1.36	--	1.0 1.33	--	.00	--	--	70 38A 0.1			
05/12/75 1010	5:50	10.4 430	10.4 97	53.8F 12.0C	8.2 8.0	114 115	--	--	2.0 09 8	--	0 400	63 1.03	--	.7 1.2	--	.00	--	--	54 22A 0.1			
06/09/75 0900	5:50	13.73 5100	9.2 94	8.8F 18.0C	7.4 7.5	114 104	--	--	2.1 09 9	--	0 400	50 1.92	--	1.4 1.05	--	.00	--	--	48 10A 0.1			
07/07/75 1020	5:50	17.44 176F	8.9 94	60.8F 2.0C	7.8	149	--	--	--	--	--	--	--	--	--	--	--	--	--	1AF		
08/11/75 0945	5:50	14.04 758	9.3 101	7.7F 21.5C	8.0	194	--	--	--	--	--	--	--	--	--	--	--	--	--	1AF		
09/02/75 1200	5:50	11.05 473	9.4 104	80.0F 2.0C	8.1 8.2	190 194	--	--	4.2 18 9	--	0 400	102 1.67	--	4.0 1.11	--	.00	--	--	92 0A 0.2			
F4 130.00 TRINITY RIVER NEAR HUBERT RANCH																						
11/12/74 1000	5:50	11.1 423	11.1 97	47.3F 8.5C	7.5	155	--	--	--	--	--	--	--	--	--	--	--	--	--	1AF		
01/06/75 1030	5:50	12.15 250	12.5 101	41.0F 5.0C	7.3	109	--	--	--	--	--	--	--	--	--	--	--	--	--	22AF		
03/10/75 0915	5:50	11.0 4430	11.0 93	44.6F 7.0C	7.5	129	--	--	--	--	--	--	--	--	--	--	--	--	--	66AF		
03/12/75 1415	5:50	11.05 800E	11.5 94	46.5F 4.0C	7.5	141	16 85 59	5.5 45 31	2.6 11 8	7 102 1	0 400	75 1.23 84	4.8 1.0 7	1.4 1.05 4	.2 1.00	1.0 --	--	--	82 68 65 25A 4 0.2			
05/12/75 0910	5:50	10.4 421	10.4 98	52.7F 11.5C	7.4 7.5	98	--	--	1.8 08 8	--	0 400	54 1.09	--	.6 1.2	--	.00	--	--	45 8A 0.1			
07/07/75 0930	5:50	17.44 1660	8.9 103	60.8F 2.0C	7.8	115	--	--	--	--	--	--	--	--	--	--	--	--	--	1AF		
09/02/75 0930	5:50	11.05 473	9.4 104	80.0F 2.0C	8.1 8.2	190 194	--	--	4.2 18 9	--	0 400	102 1.67	--	4.0 1.11	--	.00	--	--	92 0A 0.2			
F4 160.00 TRINITY RIVER AT LEWISTON																						
11/12/74 0930	5:50	11.1 423	11.1 97	47.3F 8.5C	7.5	155	--	--	--	--	--	--	--	--	--	--	--	--	--	1AF		
03/10/75 0735	5:50	11.1 423	11.1 97	47.3F 8.5C	7.5	155	--	--	--	--	--	--	--	--	--	--	--	--	--	1AF		
05/12/75 0730	5:50	11.1 423	11.1 97	47.3F 8.5C	7.5	155	--	--	--	--	--	--	--	--	--	--	--	--	--	1AF		
07/07/75 0800	5:50	11.1 423	11.1 97	47.3F 8.5C	7.5	155	--	--	--	--	--	--	--	--	--	--	--	--	--	1AF		

TABLE D-2 cont  
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE LAB	W.P. NO	TEMP SAT	FIELD LABORATORY		MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER					TDS GUM	TH GCM	TURB SAR		
				FW	EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F	SIC2	CUM	ACH						
TRINITY RIVER AT LEWISTON																									
CONTINUED																									
09/12/75 0734	S-40	3.04 107	1.44 98	40.2F 1.0C	4.3	70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
MAD RIVER NEAR AHCATA																									
11/12/75 143	S-57	3.04 74	1.14 11	57.2F 14.0C	4.1	201	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
01/16/75 1426	S-58 S-59	11.47 70.0	11.7 1.1	44.2F 1.0C	7.4 7.4	77 84	12 60	147 14	2.1 15	0 5	39 15	5.8 12	1.4 100	1.0 103	1.0 6	1.0 4	1.0 4	1.0 4	1.0 4	1.0 4	61 48	37 5	3704 0.2		
03/10/75 133	S-59	4.07 490	1.14 48	44.2F 1.0C	7.4	40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1364F
05/12/75 1326	S-59 S-59	0.30 124	0.4 1.7	44.4F 14.0C	4.1 7.4	107	--	--	3.0 13	-- 12	0 100	54 109	-- 105	-- 100	-- 100	-- 100	-- 100	-- 100	-- 100	-- 100	47	274 0.2	--	--	
07/07/75 133	S-59	1.01 07	0.4 1.7	46.2F 14.0C	4.1	204	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
09/02/75 133	S-59	1.37 54	1.0 1.9	46.0F 2.0C	4.1	144	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
MAD RIVER NEAR CHICK																									
10/11/75 142	S-59	4.07 127	1.14 10.1	42.0F 12.0C	7.4 7.4	143 140	--	--	5.6 24	-- 17	0 100	50 105	-- 104	-- 100	-- 100	-- 100	-- 100	-- 100	-- 100	-- 100	57	14 0.3	--	--	
11/12/75 1537	S-59 S-59	1.44 49	1.14 1.1	42.0F 12.0C	4.1 4.3	200 200	--	--	7.2 31	-- 15	0 100	04 138	-- 123	-- 100	-- 100	-- 100	-- 100	-- 100	-- 100	-- 100	87	04 0.3	--	--	
12/12/75 1445	S-59	1.04 217	1.14 1.1	5.0F 1.0C	7.4	197	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	114F
01/16/75 142	S-59	11.47 402	11.7 1.1	44.2F 14.0C	7.4	77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3684F
02/18/75 1405	S-59	1.74 70	1.14 1.1	44.2F 14.0C	7.4	64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	404F
03/10/75 1425	S-59	1.04 74	1.14 1.1	5.0F 1.0C	7.4	74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	604F
04/14/75 135	S-59 S-59	1.04 11	0.4 1.1	5.0F 11.0C	7.4 7.4	197 44	--	--	3.2 14	-- 14	0 100	30 104	-- 104	-- 100	-- 100	-- 100	-- 100	-- 100	-- 100	-- 100	34	724 0.2	--	--	
05/12/75 133	S-59	1.04 64	0.4 1.1	5.0F 1.0C	7.4	99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	384F
06/09/75 1415	S-59	1.04 211	0.4 1.1	5.0F 1.0C	7.4	197	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	44F
07/07/75 132	S-59	1.04 162	0.4 1.1	5.0F 1.0C	7.4	149	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
08/11/75 1405	S-59	1.04 39	0.4 1.1	5.0F 1.0C	7.4	183	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
09/02/75 1435	S-59	1.04 49	0.4 1.1	5.0F 1.0C	7.4	141	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
FEL RIVER AT SCOTIA																									
10/12/75 1537	S-59	1.04 49	0.4 1.1	5.0F 1.0C	7.4	181	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
11/13/75 1400	S-59	1.04 265	0.4 1.1	5.0F 1.0C	7.4	333	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
12/13/75 134	S-59	1.04 49	0.4 1.1	5.0F 1.0C	7.4	204	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4454F
01/16/75 144	S-59	1.04 340	0.4 1.1	5.0F 1.0C	7.4	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	544F
02/19/75 1404	S-59	1.04 265	0.4 1.1	5.0F 1.0C	7.4	137	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3484F
03/11/75 1425	S-59	1.04 221	0.4 1.1	5.0F 1.0C	7.4	131	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1704F
04/15/75 1244	S-59 S-59	1.04 74	0.4 1.1	5.0F 1.0C	7.4 8.4	100	--	--	3.6 17	-- 11	0 100	80 131	-- 104	-- 100	-- 100	-- 100	-- 100	-- 100	-- 100	-- 100	70	264 0.2	--	--	

TABLE D-2 cont  
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE LAB	G.M.P. /	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER					
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F	TDS SUM	TH MG	TURB SAR	
*****																				
F.R. 1105.00					EEL RIVER AT SCOTIA					CONTINUED										
05/13/75	SJSN	12.53	9.4	65.3F	7.8	144	--	--	3.8	--	0	74	--	1.6	--	.10	--	63	284	
1235	SJSN	06.42	107	10.5C	6.7	142	--	--	17	--	.00	1.21	--	.05	--	--	--	0.2		
06/10/75	SJSN	11.40	8.6	71.6F	6.7	187	--	--	--	--	--	--	--	--	--	--	--	64F		
1205	SJSN	15.9	94	22.0C																
07/08/75	SJSN	1.74	9.4	64.8F	6.2	250	--	--	6.8	--	0	128	--	5.7	--	.10	--	113	24	
1245	SJSN	4.2	105	21.0C	6.1	241	--	--	30	--	.00	2.10	--	.16	--	--	--	0.3		
08/12/75	SJSN	1.05	8.6	60.9F	6.0	311	--	--	--	--	--	--	--	--	--	--	--	14F		
1110	SJSN	134	97	21.5C																
09/03/75	SJSN	4.93	9.5	7.7F	6.0	299	--	--	--	--	--	--	--	--	--	--	--	04F		
1405	SJSN	147	107	21.5C																
*****																				
F.R. 1134.50					EEL RIVER AT SOUTH FORK															
10/02/74	SJSN		4.5	64.4F	7.4	330	--	--	--	--	--	--	--	--	--	--	--	14F		
1605	SJSN	24	107	14.0C																
11/13/74	SJSN		10.5	55.4F	6.3	338	--	--	10	--	0	138	--	10	--	.20	--	153	04	
1445	SJSN	14	101	13.0C	6.3	350	--	--	44	--	.00	2.26	--	.28	--	--	--	0.4		
12/03/74	SJSN		10.2	5.9F	6.1	270	--	--	7.4	--	0	111	--	5.8	--	.20	--	117	704	
1430	SJSN	232	92	11.5C	6.0	264	--	--	33	--	.00	1.82	--	.16	--	--	--	0.3		
01/07/75	SJSN		11.7	47.3F	6.1	105	--	--	--	--	--	--	--	--	--	--	--	3524F		
1430	SJSN	2140	101	14.5C																
02/19/75	SJSN		11.1	47.2F	7.4	121	--	--	4.6	--	0	66	--	.8	--	.10	--	58	5904	
1650	SJSN	2660	94	14.0C	7.7	125	--	--	20	--	.00	1.08	--	.02	--	--	--	0.3		
03/11/75	SJSN		10.4	46.2F	6.4	131	--	--	--	--	--	--	--	--	--	--	--	1624F		
1310	SJSN	13800	94	14.0C																
04/15/75	SJSN		10.1	51.8F	7.6		--	--	3.8	--	0	79	--	1.7	--	.00	--	69	314	
1400	SJSN	4300	91	11.0C	6.0	154	--	--	17	--	.00	1.29	--	.09	--	--	--	0.2		
05/13/75	SJSN		9.4	63.5F	7.4	133	--	--	--	--	--	--	--	--	--	--	--	434F		
1320	SJSN	421	94	17.5C																
06/10/75	SJSN		9.4	63.5F	7.4	160	--	--	3.3	--	0	77	--	.9	--	.00	--	65	104	
1435	SJSN	1200	94	17.5C	7.4	147	--	--	14	--	.00	1.26	--	.03	--	--	--	0.2		
07/08/75	SJSN		9.4	71.6F	6.1	219	--	--	--	--	--	--	--	--	--	--	--	14F		
1330	SJSN	247	104	22.0C																
08/12/74	SJSN		8.6	64.8F	7.4	285	--	--	6.8	--	0	145	--	5.0	--	.10	--	135	04	
1155	SJSN	68	95	21.0C	7.4	297	--	--	30	--	.00	2.34	--	.14	--	--	--	0.3		
09/03/75	SJSN		9.4	60.9F	7.4	283	--	--	7.6	--	0	139	--	7.4	--	.10	--	132	04	
1455	SJSN	57	105	21.5C	6.2	285	--	--	33	--	.00	2.28	--	.21	--	--	--	0.3		
*****																				
F.R. 1324.50					EEL RIVER ABOVE OUTLET CREEK NEAR UDS HIOS															
10/03/74	SJSN		9.2	62.8F	6.1	236	--	--	4.8	--	0	114	--	3.7	--	.40	--	96	04	
0930	SJSN	7.4	94	17.0C	6.1	244	--	--	38	--	.00	1.87	--	.17	--	--	--	0.4		
11/14/74	SJSN		10.4	52.7F	7.4	274	--	--	--	--	--	--	--	--	--	--	--	04F		
0920	SJSN	25	95	11.5C																
12/04/74	SJSN		10.3	51.0F	7.6	154	--	--	--	--	--	--	--	--	--	--	--	1304F		
0900	SJSN	151	94	14.0C																
01/08/75	SJSN		11.5	46.2F	7.6	43	--	--	--	--	--	--	--	--	--	--	--	1504F		
1335	SJSN	3730	103	14.0C																
02/20/75	SJSN		12.2	44.8F	7.7	94	--	--	4.2	--	0	51	--	.3	--	.20	--	44	1404	
0945	SJSN	68	104	7.0C	7.0	97	--	--	18	--	.00	.84	--	.11	--	--	--	0.3		
03/12/75	SJSN		10.4	46.4F	6.1	115	--	--	--	--	--	--	--	--	--	--	--	498F		
0715	SJSN	2300	94	14.0C																
04/16/75	SJSN		10.5	51.0F	7.6		--	--	4.6	--	0	80	--	4.5	--	.10	--	70	54	
1025	SJSN	317	96	14.0C	6.0	158	--	--	20	--	.00	1.31	--	.13	--	--	--	0.2		
05/14/75	SJSN		9.4	57.2F	7.4	135	--	--	--	--	--	--	--	--	--	--	--	124F		
1005	SJSN	794	93	14.0C																
06/11/75	SJSN		7.8	69.8F	6.0	176	--	--	--	--	--	--	--	--	--	--	--	24F		
0755	SJSN	60	90	21.0C																



TABLE D-2 CONT  
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE L-H	TEMP F	DO SAT	FIELD LABORATORY PM	FC	MINERAL CONSTITUENTS IN										MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER					MILLIGRAMS PER LITER											
						CA	MG	NA	K	CO3	PERCENT REACTANCE VALUE			B	F	Y05 SUM	T-CH	TURB SAR														
											HCO3	SO4	CL						NO3	SIG2	Y05	ACH										
FEL RIVER ABOVE		OUTLET CREEK NEAR DOS RIOS															CONTINUED															
07/09/75 0930	5-50		14	73.4F 23.0C	8.2	230	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	04F	
08/13/75 0915	5-50		14.4	73.4F 23.0C	8.1	242	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
09/06/75 0945	5-50		14.4	72.0F 22.2C	8.2	227	--	--	9.5	--	0	104	--	4.4	--	130	--	--	--	--	--	--	--	--	--	--	--	95	04	0.4		
FEL RIVER ABOVE		OUTLET CREEK NEAR LONGVALE																														
10/03/75 0905	5-50		14.4	74.9F 24.4C	8.1	320	--	--	16	--	0	144	--	23	--	240	--	--	--	--	--	--	--	--	--	--	--	121	04	0.6		
11/14/75 0855	5-50		14.4	74.9F 24.4C	8.1	343	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
12/04/75 0945	5-50		14.4	74.9F 24.4C	8.1	343	--	--	3.5	--	0	33	--	1.0	--	120	--	--	--	--	--	--	--	--	--	--	34	1104	0.3			
01/08/75 1110	5-50		14.4	74.9F 24.4C	8.1	343	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	754F
02/20/75 0855	5-50		14.4	74.9F 24.4C	8.1	343	--	--	3.8	--	0	28	--	1.0	--	120	--	--	--	--	--	--	--	--	--	--	24	1304	0.3			
03/12/75 1145	5-50		14.4	74.9F 24.4C	8.1	103	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	104F
04/16/75 1045	5-50		14.4	74.9F 24.4C	8.1	130	--	--	5.5	--	0	70	--	5.0	--	120	--	--	--	--	--	--	--	--	--	--	57	24	0.3			
05/14/75 1030	5-50		14.4	74.9F 24.4C	8.1	163	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
06/11/75 0730	5-50		14.4	74.9F 24.4C	8.1	230	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
07/09/75 1005	5-50		14.4	74.9F 24.4C	8.1	250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
08/13/75 0945	5-50		14.4	74.9F 24.4C	8.1	243	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
09/06/75 1000	5-50		14.4	74.9F 24.4C	8.1	294	--	--	17	--	0	136	--	20	--	210	--	--	--	--	--	--	--	--	--	--	--	115	04	0.7		
FEL RIVER MIDDLE FLOW		AT DOS RIOS																														
10/03/75 1000	5-50		14.4	74.9F 24.4C	8.1	157	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F
11/14/75 0945	5-50		14.4	74.9F 24.4C	8.1	171	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	04F
12/04/75 0945	5-50		14.4	74.9F 24.4C	8.1	154	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3634F
01/08/75 1415	5-50		14.4	74.9F 24.4C	8.1	113	--	--	3.2	--	0	57	--	1.7	--	110	--	--	--	--	--	--	--	--	--	--	52	3704	0.2			
02/20/75 1045	5-50		14.4	74.9F 24.4C	8.1	104	--	--	4.2	--	0	57	--	1.0	--	110	--	--	--	--	--	--	--	--	--	--	50	3604	0.3			
03/12/75 0900	5-50		14.4	74.9F 24.4C	8.1	130	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	664F
04/16/75 0945	5-50		14.4	74.9F 24.4C	8.1	145	--	--	3.2	--	0	74	--	1.7	--	110	--	--	--	--	--	--	--	--	--	--	66	404	0.2			
05/14/75 0915	5-50		14.4	74.9F 24.4C	8.1	92	--	--	1.9	--	0	44	--	1.0	--	110	--	--	--	--	--	--	--	--	--	--	42	1504	0.1			
06/11/75 0825	5-50		14.4	74.9F 24.4C	8.1	119	--	--	2.5	--	0	59	--	1.9	--	110	--	--	--	--	--	--	--	--	--	--	54	04	0.1			
07/09/75 0855	5-50		14.4	74.9F 24.4C	8.1	215	--	--	4.9	--	0	99	--	4.2	--	110	--	--	--	--	--	--	--	--	--	--	95	04	0.2			
08/13/75 0835	5-50		14.4	74.9F 24.4C	8.1	202	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	04F

TABLE D-2 cont  
MINERAL ANALYSES OF SURFACE WATER

[illegible]

TABLE D-2 CONT  
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE L-H	G.M. 2	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	9	F	TDS SUM	TH MCM	TURB SAP
FA 1010.00 ERL RIVER SOUTH FORK NEAR MIRANDA CONTINUED																			
04/15/75 1430	5-5N	6.3M	10.2	5.4F	8.3	--	--	5.2	--	0	71	--	2.8	--	.00	--	59	6A	
		11.0N	9.2	1.5C	8.0	14.2	--	.23	--	.00	14.1A	--	.08	--	--	--	0.3		
05/13/75 1350	5-5N	6.8J	9.5	64.8F	8.1	15.7	--	--	--	--	--	--	--	--	--	--	1AF		
		6.8J	10.7	21.0C	--	--	--	--	--	--	--	--	--	--	--	--	--		
06/10/75 1520	5-5N	6.1F	9.6	77.0F	8.2	20.7	--	--	--	--	--	--	--	--	--	--	1AF		
		20.2	11.6	25.0C	--	--	--	--	--	--	--	--	--	--	--	--	--		
07/08/75 1400	5-5N	6.82	9.6	75.2F	8.2	22.4	--	--	--	--	--	--	--	--	--	--	1AF		
		14.8	11.4	24.0C	--	--	--	--	--	--	--	--	--	--	--	--	--		
08/12/75 1300	5-5N	6.89	11.7	77.0F	8.4	21.4	--	--	--	--	--	--	--	--	--	--	1AF		
		6.1	14.1	25.0C	--	--	--	--	--	--	--	--	--	--	--	--	--		
09/03/75 1535	5-5N	6.86	10.2	74.3F	8.2	23.8	--	--	--	--	--	--	--	--	--	--	1AF		
		5.0	12	23.5C	--	--	--	--	--	--	--	--	--	--	--	--	--		
FA 5274.00 VAN DUSEN RIVER NEAR BRIDGEVILLE																			
10/02/74 1430	5-5N	3.8.1	10.1	82.0F	8.1	29.9	--	--	--	--	--	--	--	--	--	--	1AF		
		7.1	10.4	17.0C	--	--	--	--	--	--	--	--	--	--	--	--	--		
11/13/74 1245	5-5N	3.44	11.4	53.0F	8.3	20.2	--	--	--	--	--	--	--	--	--	--	1AF		
		4.2	10.7	12.0C	--	--	--	--	--	--	--	--	--	--	--	--	--		
12/03/74 1215	5-5N	6.14	11.5	48.2F	7.4	15.4	--	--	--	--	--	--	--	--	--	--	140AF		
		14.6	4.2	9.0C	--	--	--	--	--	--	--	--	--	--	--	--	--		
01/07/75 1210	5-5N	7.36	11.3	48.4F	7.5	10.7	--	--	3.4	--	0	56	--	1.4	--	.10	50	170A	
		25.0	9.6	8.0C	7.4	11.4	--	--	.15	--	.92	--	.05	--	--	--	0.2		
02/19/75 1515	5-5N	12.3	12.4	48.4F	8.1	8.1	--	--	3.6	--	0	52	--	.0	--	.10	45	850A	
		112.0	10.2	8.0C	7.5	9.5	--	--	.16	--	.00	.85	--	.00	--	--	0.2		
03/11/75 1130	5-5N	6.25	11.1	48.2F	7.4	10.6	--	--	--	--	--	--	--	--	--	--	53AF		
		15.9	9.7	9.0C	--	--	--	--	--	--	--	--	--	--	--	--	--		
04/15/75 1140	5-5N	6.02	11.4	48.4F	7.4	--	--	2.8	--	0	56	--	.0	--	.00	--	49	17A	
		21.2	9.7	8.0C	8.1	11.0	--	--	.12	--	.00	.92	--	.00	--	--	0.2		
05/13/75 1120	5-5N	6.04	9.3	66.4F	7.6	12.1	--	--	--	--	--	--	--	--	--	--	7AF		
		20.8	9.9	14.0C	--	--	--	--	--	--	--	--	--	--	--	--	--		
06/10/75 1045	5-5N	6.04	9.4	61.8F	8.1	17.5	--	--	--	--	--	--	--	--	--	--	1AF		
		13.4	9.5	21.0C	--	--	--	--	--	--	--	--	--	--	--	--	--		
07/08/75 1145	5-5N	6.1	9.4	60.2F	8.2	21.1	--	--	--	--	--	--	--	--	--	--	1AF		
		5.1	10.5	15.0C	--	--	--	--	--	--	--	--	--	--	--	--	--		
08/12/75 1400	5-5N	6.12	8.4	60.0F	8.2	26.0	--	--	--	--	--	--	--	--	--	--	1AF		
		1.4	9.4	2.0C	--	--	--	--	--	--	--	--	--	--	--	--	--		
09/03/75 1220	5-5N	6.08	10.2	73.4F	8.4	24.7	--	--	--	--	--	--	--	--	--	--	1AF		
		1.6	11.9	14.0C	--	--	--	--	--	--	--	--	--	--	--	--	--		
F7 1100.00 MATTOLE RIVER NEAR PETHOLIA																			
10/02/74 1235	5-5N	6.14	12.3	68.0F	8.2	27.0	--	--	--	--	--	--	--	--	--	--	10AF		
		4.0	13.6	21.5C	--	--	--	--	--	--	--	--	--	--	--	--	--		
02/19/75 1315	5-5N	6.34	10.4	5.0F	8.3	10.1	--	--	--	--	--	--	--	--	--	--	10AF		
		7.80	9.4	1.0C	--	--	--	--	--	--	--	--	--	--	--	--	--		
09/03/75 1035	5-5N	1.34	4.2	66.2F	8.1	26.0	--	--	--	--	--	--	--	--	--	--	1AF		
		3.7	9.9	14.0C	--	--	--	--	--	--	--	--	--	--	--	--	--		
F7 5100.00 NEAR RIVER AT CAPETRAN																			
10/02/74 1120	5-5N	10.2	10.5	82.0F	8.1	34.2	--	--	--	--	--	--	--	--	--	--	1AF		
		1.0	10.5	17.0C	--	--	--	--	--	--	--	--	--	--	--	--	--		
02/19/75 1200	5-5N	11.1	5.0F	7.3	10.9	12	2.2	8.2	2.4	0	38	8.4	6.4	1.5	.30	--	62	39	330A
		10.0	1.0C	7.1	11.2	.60	.18	.36	.07	.00	.62	.17	.24	.02	--	--	62	8	0.6
09/03/75 0950	5-5N	20.6	10.2	62.6F	8.1	33.8	--	--	--	--	--	--	--	--	--	--	0AF		
		20.6	10.5	17.0C	--	--	--	--	--	--	--	--	--	--	--	--	--		

TABLE D-3

MINOR ELEMENT ANALYSIS OF SURFACE WATER

Lab and Sampler Agency Code

5050 - Department of Water Resources

Abbreviations

<u>TIME</u>	- Pacific Standard Time on a 24-hour clock
<u>DISCH</u>	- Instantaneous discharge in cubic feet per second
<u>EC</u>	- Electrical conductance in micromhos at 25° Celsius
<u>TEMP</u>	- Water temperature at time of sampling in degrees Fahrenheit (F) and Celsius (C)
<u>PH</u>	- Measure of acidity (<7) or alkalinity (>7) of water
<u>CHROM (ALL)</u>	- All chromium
<u>CHROM (HEX)</u>	- Hexavalent chromium
<u>D</u>	- Dissolved
<u>T</u>	- Total

TABLE D-3  
MINOR ELEMENT ANALYSIS OF SURFACE WATER

DATE TIME	SAMP L-NH	TEMP PH	CONSTITUENTS IN MILLIGRAMS PER LITER					LEAD MANGANESE	MERCURY SELENIUM	SILVER ZINC	
			AMSENIC	ARSENIC	CADMIUM	CHROMIUM	IRON				
F1 1300.00 SMITH RIVER NEAR CRESCENT CITY											
04/15/75	5:00	8.2 C	--	--	--	--	1.00 T	0.01 T	--	--	
0700	5:00	8.2	--	0.00	T	--	1.1 T	0.00 T	--	0.00 T	
F2 1050.00 SHASTA RIVER NEAR YUBA											
03/18/75	5:00	8.2 C	--	--	--	--	1.02 T	0.00 T	--	--	
1251	5:00	8.2	--	0.02	T	--	1.1 T	0.04 T	--	0.04 T	
05/05/75	5:00	12.2 C	--	--	--	--	1.00 T	0.01 T	--	--	
1227	5:00	12.2	--	1.00	T	--	1.18 T	0.02 T	--	0.01 T	
F3 5250.00 SCOTT RIVER NEAR FORT JONES											
05/05/75	5:00	11.2 C	--	--	--	--	1.00 T	0.00 T	--	--	
1635	5:00	7.2	--	0.00	T	--	1.2 T	0.03 T	--	0.02 T	
F3 1100.00 KLAMATH RIVER NEAR KLAMATH											
04/14/75	5:00	10.2 C	--	--	--	--	1.01 T	0.00 T	--	--	
1435	5:00	7.4	--	1.00	T	--	0.3 T	0.09 T	--	0.01 T	
F3 1260.00 KLAMATH RIVER AT OMBLENS											
04/14/75	5:00	9.2 C	--	--	--	--	1.00 T	0.00 T	--	--	
1115	5:00	7.4	--	0.00	T	--	2.0 T	0.04 T	--	0.00 T	
F3 1431.00 KLAMATH RIVER NEAR NEJAD VALLEY											
03/18/75	5:00	3.2 C	--	--	--	--	1.02 T	0.00 T	--	--	
1505	5:00	7.7	--	1.00	T	--	1.1 T	0.05 T	--	0.03 T	
F3 1559.00 KLAMATH RIVER BELOW IRON MINE DAM											
03/18/75	5:00	7.2 C	--	--	--	--	1.00 T	0.00 T	--	--	
1145	5:00	7.4	--	1.00	T	--	2.1 T	0.09 T	--	0.01 T	
05/05/75	5:00	10.2 C	--	--	--	--	1.00 T	0.00 T	--	--	
1135	5:00	7.4	--	0.00	T	--	0.4 T	0.03 T	--	0.01 T	
F4 1100.00 TRINITY RIVER AT HOOPS											
04/14/75	5:00	9.2 C	--	--	--	--	1.01 T	0.00 T	--	--	
1005	5:00	7.4	--	1.00	T	--	0.5 T	0.06 T	--	0.01 T	
F4 1376.00 TRINITY RIVER NEAR HUNTER HATCH											
05/12/75	5:00	11.2 C	--	--	--	--	1.00 T	0.00 T	--	--	
0917	5:00	7.4	--	0.00	T	--	1.49 T	0.03 T	--	0.01 T	
F4 1641.00 TRINITY RIVER AT CLARKSTON											
05/12/75	5:00	9.2 C	--	--	--	--	1.00 T	0.00 T	--	--	
073	5:00	7.4	--	0.00	T	--	1.44 T	0.01 T	--	0.00 T	
F5 1107.00 WAO RIVER NEAR ARIZONA											
05/12/75	5:00	11.2 C	--	--	--	--	1.00 T	0.00 T	--	--	
1325	5:00	7.4	--	0.00	T	--	2.3 T	0.06 T	--	0.01 T	
F5 5101.00 REDWOOD CREEK AT OJIVER											
04/14/75	5:00	11.2 C	--	--	--	--	1.01 T	0.01 T	--	--	
1351	5:00	7.2	--	1.00	T	--	0.8 T	0.10 T	--	0.02 T	
F6 1114.00 EEL RIVER AT SCOTIA											
04/15/75	5:00	10.2 C	--	--	--	--	1.00 T	0.00 T	--	--	
1245	5:00	7.4	--	0.00	T	--	3.1 T	0.04 T	--	0.01 T	
F6 1134.45 EEL RIVER AT SOUTH FLANK											
04/15/75	5:00	11.2 C	--	--	--	--	1.00 T	0.00 T	--	--	
1400	5:00	7.4	--	1.00	T	--	3.0 T	0.04 T	--	0.01 T	
F6 1324.50 EEL RIVER ABOVE OUTLET CREEK NEAR LOS MIOS											
04/18/75	5:00	10.2 C	--	--	--	--	0.00 T	0.00 T	--	--	
1025	5:00	7.4	--	1.1	T	--	0.45 T	0.01 T	--	0.00 T	
F6 1334.00 OUTLET CREEK NEAR LINDAVALE											
04/18/75	5:00	11.2 C	--	--	--	--	1.00 T	0.00 T	--	--	
1045	5:00	7.4	--	1.01	T	--	1.33 T	0.01 T	--	0.00 T	
F6 3044.00 EEL RIVER MIDDLE FIRM AT LOS RIOS											
04/18/75	5:00	7.2 C	--	--	--	--	1.01 T	0.00 T	--	--	
0946	5:00	7.4	--	0.00	T	--	0.4 T	0.07 T	--	0.01 T	
F6 3051.00 MILL CREEK NEAR COVELO											
04/18/75	5:00	8.2 C	--	--	--	--	1.00 T	0.00 T	--	--	
0905	5:00	7.4	--	1.00	T	--	1.37 T	0.01 T	--	0.00 T	
F6 3203.00 BLACK BUTTE RIVER NEAR COVELO											
04/18/75	5:00	4.2 C	--	--	--	--	1.00 T	0.01 T	--	--	
0745	5:00	7.4	--	0.01	T	--	2.2 T	0.03 T	--	0.01 T	
F6 4105.00 EEL RIVER SOUTH FORK NEAR MINANDA											
04/15/75	5:00	10.2 C	--	--	--	--	1.00 T	0.00 T	--	--	
1435	5:00	7.4	--	0.00	T	--	2.8 T	0.01 T	--	0.00 T	



TABLE D-3 cont  
MINOR ELEMENT ANALYSIS OF SURFACE WATER

DATE TIME	SAMP LNR	TEMP °F	CONSTITUENTS IN MILLIGRAMS PER LITER					LEAD MANGANESE	MERCURY SELENIUM	SILVER ZINC
			ARSENIC	BARIUM	CHROM (TCL)	COPPER	IRON			
04/18/76	5 30	8.0	--	--	--	0.00	T	0.00	T	--
11.1	5 30	7.4	--	0.01	T	0.1	T	0.02	T	0.01

FD 279.00 VAN DUSEN RIVER NEAR BRIDGEVILLE

TABLE D-4  
NUTRIENT ANALYSIS OF SURFACE WATER

Lab and Sampler Agency Code

5050 - Department of Water Resources

Abbreviations

<u>TIME</u>	- Pacific Standard Time on a 24-hour clock
<u>G.H.</u>	- Instantaneous gage height in feet above an established datum
<u>Q</u>	- Instantaneous discharge measured in cubic feet per second (cfs). "E" indicates the value has been estimated.
<u>TEMP</u>	- Water temperature in degrees Fahrenheit (F) or Celsius (C)
<u>TURB</u>	- Jackson Turbidity Units measured with a Hellige Turbidimeter (E) or a Hach Nephelometer (A)
<u>PH</u>	- Measure of acidity or alkalinity of water
<u>EC</u>	- Electrical conductance in micromhos at 25° C.
<u>HCO<sub>3</sub></u>	- Bicarbonate
<u>CO<sub>3</sub></u>	- Carbonate

Nitrogen Series as N

NO <sub>2</sub>	- Unfiltered nitrite
NH <sub>3</sub>	- Unfiltered ammonia
NO <sub>3</sub>	- Unfiltered nitrate
ORG N	- Organic nitrogen
DIS ORG N	- Dissolved organic nitrogen
NH <sub>3</sub> + ORG N	- Ammonia plus organic nitrogen

Phosphorus Series as P

DIS A.H.PO <sub>4</sub>	- Dissolved acid hydrolyzable phosphate
D O-PO <sub>4</sub>	- Dissolved orthophosphate
T O-PO <sub>4</sub>	- Total orthophosphate
D TOT P	- Dissolved total phosphorus
TOT P	- Total phosphorus



TABLE D-4  
NUTRIENT ANALYSIS OF SURFACE WATER

DATE TIME	SAMP LWR	TEMP F-C	FEC LAB EC	FIELD			NUTRIENT CONSTITUENTS IN MILLIGRAMS PER LITER							
				TURB	CALCIUM	D.O.P	AMMONIA	AMMONIUM	NITRATES	NITRITES	PHOSPHATE	PHOSPHORUS	TOTAL P	TOTAL P
				CMO	CMO	CMO	CMO	CMO	CMO	CMO	CMO	CMO	CMO	CMO
F0 1300.00 SMITH RIVER NEAR CHESTNUT CITY														
04/15/75	5:30	6.5C	4.2	86	14	--	--	--	--	--	0.01	--	--	0.01
0700	5:30					--	0.01	--	0.0	--	--	--	--	--
F2 1050.00 SHASTA RIVER NEAR YREKA														
03/18/75	5:30	6.5C	4.2	335	1414	--	--	--	--	--	0.23	--	--	--
1251	5:30					--	0.34	--	1.5	--	--	--	0.70	--
05/05/75	5:30	12.1C	0.2	517	14	--	--	--	--	--	0.09	--	--	0.12
1226	5:30					--	0.51	--	0.0	--	--	--	--	--
F2 525.00 SCOTT RIVER NEAR FRONT JONES														
05/05/75	5:30	11.1C	7.6	176	74	--	--	--	--	--	0.00	--	--	--
1634	5:30					--	0.19	--	0.2	--	--	--	0.05	--
F3 1100.00 KLAMATH RIVER NEAR KLAMATH														
04/14/75	5:30	10.0C	7.6	150	504	--	--	--	--	--	0.02	--	--	--
1435	5:30					--	0.07	--	0.2	--	--	--	0.24	--
F3 1221.01 KLAMATH RIVER AT OREGON														
04/14/75	5:30	9.1C	7.6	159	224	--	--	--	--	--	0.03	--	--	0.06
1114	5:30					--	0.14	--	0.2	--	--	--	--	--
F3 1431.00 KLAMATH RIVER NEAR SEARD VALLEY														
03/18/75	5:30	3.0C	7.7	172	1044	--	--	--	--	--	0.10	--	--	--
1505	5:30					--	0.40	--	1.0	--	--	--	0.40	--
06/03/75	5:30	14.0C	7.6	116	244	--	--	--	--	--	0.01	--	--	--
1214	5:30					--	0.15	--	--	--	--	--	--	--
F3 1544.01 KLAMATH RIVER BELOW IRON GATE DAM														
11/07/74	5:30	10.0C	7.2	176	1344	--	--	--	--	--	0.17	--	--	--
1631	5:30					--	0.75	--	--	--	--	--	--	--
03/18/75	5:30	7.0C	7.5	190	2144	--	--	--	--	--	0.14	--	--	0.26
1145	5:30					--	0.56	--	1.0	--	--	--	--	--
05/05/75	5:30	10.0C	7.6	180	34	--	--	--	--	--	0.06	--	--	0.10
1135	5:30					--	0.10	--	0.0	--	--	--	--	--
F4 1800.00 TRINITY RIVER AT HODGE														
01/06/75	5:30	6.5C	7.6	122	444	--	--	--	--	--	0.00	--	--	--
1215	5:30					--	0.08	--	--	--	--	--	--	--
03/12/75	5:30	46.5E	7.5	141	654	--	--	--	--	--	0.01	--	--	0.13
1050	5:30					--	0.03	--	0.2	--	--	--	--	--
04/14/75	5:30	9.0C	7.6	146	384	--	--	--	--	--	0.01	--	--	0.21
1005	5:30					--	0.01	--	0.1	--	--	--	--	--
05/12/75	5:30	12.0C	4.2	115	224	--	--	--	--	--	0.00	--	--	--
1011	5:30					--	0.12	--	--	--	--	--	--	--
06/04/75	5:30	14.0C	7.4	114	104	--	--	--	--	--	0.02	--	--	--
0400	5:30					--	0.05	--	--	--	--	--	--	--
09/02/75	5:30	20.0C	4.0	190	04	--	--	--	--	--	0.00	--	--	--
1200	5:30					--	0.10	--	--	--	--	--	--	--
F4 13/0.00 TRINITY RIVER NEAR HURST MARCH														
03/12/75	5:30			142	254	--	--	--	--	--	0.01	--	--	0.07
1415	5:30					--	0.05	--	0.1	--	--	--	--	--
05/12/75	5:30	11.5C	7.4	96	84	--	--	--	--	--	0.01	--	--	0.03
0910	5:30					--	0.00	--	0.1	--	--	--	--	--
F4 164.00 TRINITY RIVER AT LEWISTON														
11/12/74	5:30	8.1C	7.4	78	384	--	--	--	--	--	0.00	--	--	--
0831	5:30					--	0.05	--	--	--	--	--	--	--
01/05/75	5:30	6.0C	6.4	40	04	--	--	--	--	--	0.00	--	--	--
0400	5:30					--	0.22	--	--	--	--	--	--	--
05/12/75	5:30	9.0C	7.5	78	14	--	--	--	--	--	0.00	--	--	0.01
0730	5:30					--	0.00	--	0.1	--	--	--	--	--
F5 1102.00 MAD RIVER NEAR ANCHUT														
05/12/75	5:30	14.1C	6.0	197	274	--	--	--	--	--	0.01	--	--	0.06
1324	5:30					--	0.01	--	0.1	--	--	--	--	--
F5 5104.00 REDWOOD CREEK AT WHICK														
04/14/75	5:30	11.0C	7.2	94	724	--	--	--	--	--	0.02	--	--	0.11
1350	5:30					--	0.04	--	0.2	--	--	--	--	--
F6 1100.00 EEL RIVER AT SCOTIA														
04/15/75	5:30	10.5C	7.6	160	244	--	--	--	--	--	0.01	--	--	0.00
1245	5:30					--	0.04	--	0.1	--	--	--	--	--
F6 1154.00 EEL RIVER AT SOUTH FORK														
04/15/75	5:30	11.1C	7.6	154	314	--	--	--	--	--	0.01	--	--	0.03
1400	5:30					--	0.02	--	0.1	--	--	--	--	--



TABLE D-4 cont

NUTRIENT ANALYSIS OF SURFACE WATER

DATE TIME	SAMP L&#39;	TEMP	F&#39;PH	FIELD			ANALYST CONSTITUENTS IN MILLIGRAMS PER LITER										D TOT P
				DO	CHLOROPHYLL a	TSS	AMMONIA	NITRATE	NITRITE	PHOSPHORUS TOTAL	PHOSPHORUS AMMONIA	PHOSPHORUS NITRATE	PHOSPHORUS NITRITE	PHOSPHORUS ORTHOPHOSPHATE	PHOSPHORUS DIETHANOLAMINE	PHOSPHORUS OTHER	
F&#39; 13&#39;4&#39;00																	
EEL RIVER ABOVE INLET CREEK NEAR LOS H&#39;S																	
01/03/75	5:30	17.0	7.4	230	0.45	--	--	--	--	--	--	--	--	--	--	--	--
0930	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/20/75	5:30	7.0	7.7	94	1.04	--	--	--	--	--	--	--	--	--	--	--	--
0945	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
04/14/75	5:30	11.0	7.4	158	0.4	--	--	--	--	--	--	--	--	--	--	--	--
1325	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/04/75	5:30	20.0	7.4	227	0.4	--	--	--	--	--	--	--	--	--	--	--	--
0945	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F&#39; 13&#39;4&#39;00																	
INLET CREEK NEAR LOS H&#39;S																	
04/14/75	5:30	11.0	7.4	24	0.4	--	--	--	--	--	--	--	--	--	--	--	--
1045	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F&#39; 30&#39;4&#39;00																	
EEL RIVER MIDDLE FORK AT LOS H&#39;S																	
01/09/75	5:30	7.0	7.4	42	0.44	--	--	--	--	--	--	--	--	--	--	--	--
1415	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/20/75	5:30	6.0	7.4	104	0.44	--	--	--	--	--	--	--	--	--	--	--	--
1045	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
04/14/75	5:30	7.40	7.4	145	0.4	--	--	--	--	--	--	--	--	--	--	--	--
0945	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/14/75	5:30	11.0	7.4	92	1.04	--	--	--	--	--	--	--	--	--	--	--	--
0915	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
06/11/75	5:30	17.0	7.4	125	0.4	--	--	--	--	--	--	--	--	--	--	--	--
0925	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
07/09/75	5:30	21.40	7.4	215	1.4	--	--	--	--	--	--	--	--	--	--	--	--
0945	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F&#39; 30&#39;4&#39;00																	
MILL CREEK NEAR COVEL																	
02/20/75	5:30	9.0	7.4	121	0.44	--	--	--	--	--	--	--	--	--	--	--	--
1125	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
04/16/75	5:30	9.0	7.4	209	0.4	--	--	--	--	--	--	--	--	--	--	--	--
0905	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/14/75	5:30	14.40	7.4	242	0.4	--	--	--	--	--	--	--	--	--	--	--	--
0935	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F&#39; 32&#39;4&#39;00																	
BLACK BUTTE RIVER NEAR COVEL																	
12/04/74	5:30	7.0	7.4	142	1.04	--	--	--	--	--	--	--	--	--	--	--	--
1155	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
04/16/75	5:30	4.0	7.4	141	0.4	--	--	--	--	--	--	--	--	--	--	--	--
0745	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
07/08/75	5:30	20.0	7.4	210	1.4	--	--	--	--	--	--	--	--	--	--	--	--
1700	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
08/17/75	5:30	20.0	7.4	251	1.4	--	--	--	--	--	--	--	--	--	--	--	--
1600	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/04/75	5:30	17.0	7.4	270	1.4	--	--	--	--	--	--	--	--	--	--	--	--
0700	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F&#39; 41&#39;4&#39;00																	
EEL RIVER SOUTH FORK NEAR M&#39;N&#39;D&#39;A																	
04/15/75	5:30	10.40	7.4	142	0.4	--	--	--	--	--	--	--	--	--	--	--	--
1430	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F&#39; 42/4&#39;00																	
VAN DUSEN RIVER NEAR M&#39;N&#39;D&#39;A																	
04/15/75	5:30	4.0	7.4	110	1.4	--	--	--	--	--	--	--	--	--	--	--	--
1140	5:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE D-5

PESTICIDES IN SURFACE WATER

All samples were collected and analyzed for pesticides by the Department of Water Resources (5050).

All samples were analyzed for two groups of pesticides, chlorinated organic compounds and organic phosphorus compounds. All pesticides detected are included in Table D-5. Other pesticides in these groups were absent or below detectable levels.

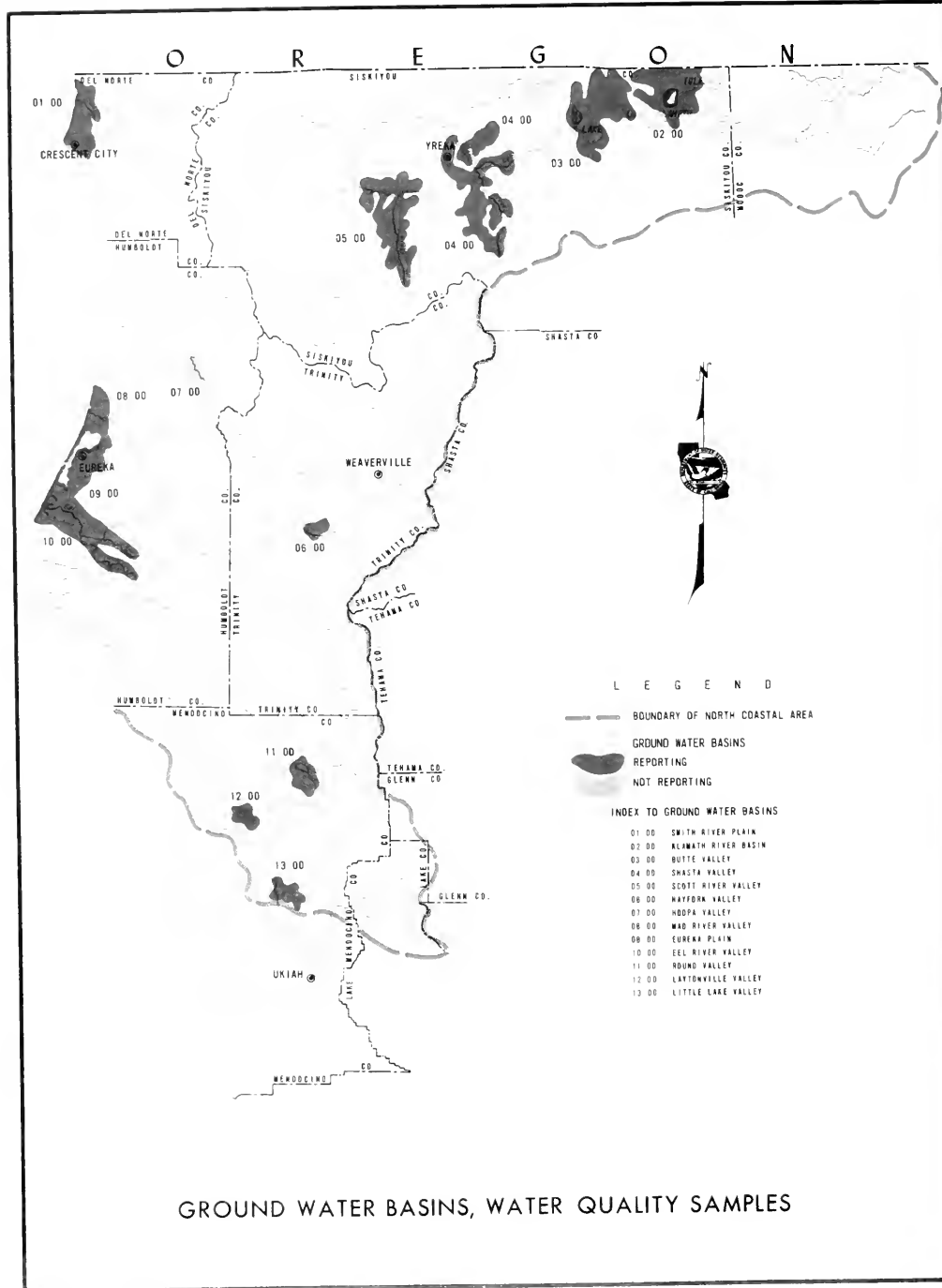
Pesticides

BHC	-	Benzene hexachloride
DDT	-	Dichloro diphenyl trichloroethane
ppDDD	-	Para para isomer of dichloro diphenyl dichloroethane
ppDDT	-	Para para isomer of dichloro diphenyl trichloroethane

When two pesticides are reported together with a slash mark separating them (ppDDE/Dieldrin, Simazine/Atrazine, etc.), the reported concentration is an undifferentiated total of the two. Either of the two pesticides could make up the entire total.

TABLE D-5

DATE TIME	SAMP LAB	TEMP EC	DO PH	PESTICIDES IN SURFACE WATER COMPOUNDS REPORTED IN MILLIGRAMS/LITER			
				CHLORINATED HYDROCARBON	ORGANIC PHOSPHORUS	OTHER	
			F1 1300.00	SMITH RIVER NEAR CRESCENT CITY			
04/15/75 5:00 0700		11.9 8.2		NONE DETECTED	NONE DETECTED		
			F2 1850.00	SHASTA RIVER NEAR YUBA			
05/05/75 5:00 1220		10.2 8.2		NONE DETECTED	NONE DETECTED		
			F2 5200.00	SCOTT RIVER NEAR FORT JONES			
05/05/75 5:00 1030		10.3 7.6		NONE DETECTED	NONE DETECTED		
			F3 1100.00	KLAMATH RIVER NEAR KLAMATH			
04/14/75 5:00 1430		10.4 7.6		NONE DETECTED	NONE DETECTED		
			F3 1549.01	KLAMATH RIVER BELOW IRON GATE DAM			
05/04/75 5:00 1130		10.4 7.6		NONE DETECTED	NONE DETECTED		
			F4 1800.00	TRINITY RIVER AT HODGA			
04/14/75 5:00 1000		10.4 7.6		NONE DETECTED	NONE DETECTED		
			F4 1370.00	TRINITY RIVER NEAR HUNNET MARCH			
05/12/75 5:00 0910		10.4 7.4		NONE DETECTED	NONE DETECTED		
			F6 1100.00	EEL RIVER AT SCOTIA			
04/15/75 5:00 1245		10.2 7.6		NONE DETECTED	NONE DETECTED		
			F6 5279.00	VAN DUSEN RIVER NEAR BRIDGEVILLE			
04/15/75 5:00 1140		11.4 7.4		NONE DETECTED	NONE DETECTED		



APPENDIX E  
GROUND WATER QUALITY

This appendix presents ground water quality data collected during the period from October 1, 1974, through September 30, 1975. The data were collected from a number of major ground water sources in the north coastal area in cooperation with local agencies. During the 1975 water year, 92 wells were sampled in 10 ground water basins.

At the time of field sampling, pH, specific conductance, and temperature measurements are made. The results are compared with measurements made in previous years. If a substantial change is noted, the samples are submitted to the laboratory for further analyses.

Laboratory analyses of ground waters are performed in accordance with "Standard Methods for the Examination of Water and Waste Water", 13th Edition, 1971.

The Region and Basin and State Well Numbering Systems are described in Appendix C, "Ground Water Measurements".

TABLE E-1

## MINERAL ANALYSES OF GROUND WATER

An explanation of column headings follows:

The LAB and SAMPLER agency code is as follows:

5050	- California Department of Water Resources
<u>TIME</u>	- Pacific Standard Time on a 24-hour clock
<u>TEMP</u>	- Water temperature in degrees Fahrenheit or degrees Celsius. The computer prints out both.
<u>PH LAB &amp; FIELD</u>	- Measure of acidity or alkalinity of water
<u>EC LAB</u>	- The electrical conductance in micromhos at 25° Celsius
<u>EC FIELD</u>	- The electrical conductance in micromhos at time of field sampling
<u>TDS</u>	- Gravimetric determination of total dissolved solids at 180° Celsius
<u>SUM</u>	- Total dissolved solids determined by addition of analyzed constituents
<u>TH</u>	- Total hardness
<u>NCH</u>	- Noncarbonate hardness
<u>SAR</u>	- Sodium adsorption ratio
<u>PERCENT</u>	- Determined by dividing the sum of the cations or anions in milliequivalents per liter into each constituent in milliequivalents per liter arriving at a percentage. For a partial analysis, an approximate value is determined by multiplying the electrical conductance by 0.01 and using that as the cation or anion sum.
<u>REACTANCE</u>	
<u>VALUE</u>	

The MINERAL CONSTITUENTS are as follows:

B	- Boron	K	- Potassium
CA	- Calcium	MG	- Magnesium
CL	- Chloride	NA	- Sodium
CO <sub>3</sub>	- Carbonate	NO <sub>3</sub>	- Nitrate
F	- Fluoride	SI0 <sub>2</sub>	- Silica
HCO <sub>3</sub>	- Bicarbonate	SO <sub>4</sub>	- Sulfate



MINERAL ANALYSES OF GROUND WATER

TIME	SAMPLE LAB	TEMP	FIELD LABORATORY		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER				MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER			
			PH	EC	CA	MG	NA	K	CO3	HC03	SO4	CL	VALUE	NO3	B	F	TD5	TH	SAR	
NORTH COASTAL REGION																				
SMITH RIVER PLAIN																				
09/10/75	5/5N	16N/01**02001	M	56.0F 13.3C	6.8	185	--	--	--	--	--	--	--	--	--	--	--	--		
1344																				
09/10/75	5/5N	16N/01**20H01	M	56.0F 14.4C	6.3	180	--	--	--	--	--	--	--	--	--	--	--	--		
1015																				
09/10/75	5/5S	16N/02**13E01	M	6.0F 15.5C	6.7	445	--	--	--	--	--	--	--	--	--	--	--	--		
1050																				
09/10/75	5/5S	17N/01**03E01	M	57.0F 13.9C	7.0	295	10	29	3.9	4.3	0	171	7.0	4.6	5.7	.00	--	167		
1430	5/5S						.50	2.38	.17	.11	.00	2.40	.15	.13	.09		149	144		
	5/5S						16	75	5	3		88	5	4	3		4	0.1		
09/10/75	5/5N	17N/01**04J01	M	58.0F 14.4C	7.0	305	--	--	--	--	--	--	--	--	--	--	--	--		
1420																				
09/10/75	5/5N	17N/01**14C02	M	61.0F 16.1C	6.7	180	--	--	--	--	--	--	--	--	--	--	--	--		
1405																				
09/10/75	5/5N	18N/01**05K01	M	56.0F 14.4C	6.1	183	11	4.7	14	.4	0	35	5.4	19	35.0	.00	--	140		
1530	5/5N						.55	.39	.01	.01	.00	.57	.11	.54	.40		97	46		
	5/5N						35	25	39	1		35	7	33	25		19	0.9		
09/10/75	5/5N	18N/01**26H01	M	67.0F 14.4C	6.6	100	--	--	--	--	--	--	--	--	--	--	--	--		
1510																				
09/10/75	5/5N	18N/01**36H02	M	51.0F 15.0C	6.8	295	--	--	--	--	--	--	--	--	--	--	--	--		
1445																				
KLAMATH RIVER BASIN																				
06/11/75	5/5N	47N/02E-15F01	M	56.0F 13.3C	7.5	183	--	--	--	--	--	--	6.9	3.5		--	--	46		
1215	5/5N												.19	.06						
06/11/75	5/5N	47N/02E-20C01	M	46.0F 8.9C	6.8	3500	260	136	176	10	0	159	436	520	264	.20	--	2070		
1240	5/5N						11.94	11.38	7.46	.20	.00	2.91	9.06	14.06	4.26		1060	1180		
							39	36	25	1		9	30	48	14		1028	2.3		
ROUTE VALLEY																				
06/11/75	5/5N	47N/01E-09C02	M	57.0F 13.9C	7.7	208	--	--	--	--	--	--	--	--	--	--	--	--		
1135																				
06/11/75	5/5N	47N/01E-06A02	M	55.0F 12.8C	7.9	1080	--	--	--	--	--	--	--	--	--	--	--	--		
1310																				
06/11/75	5/5N	47N/01E-08J01	M	55.0F 12.8C	7.8	1500	21	28	242	22	36	552	126	62	4.0	1.10	--	847		
1320	5/5N						1.05	2.30	10.53	.56	1.20	9.05	2.62	1.75	.06		814	169		
							7	16	73	4	8	62	18	12			0	8.1		
06/12/75	5/5N	47N/01E-07C02	M	64.0F 17.8C	7.9	750	--	--	--	--	--	--	--	50	2.7	--	--	157		
1005	5/5N													1.41	.04					
06/12/75	5/5N	47N/01E-07C03	M	76.0F 24.4C	8.4	440	--	--	--	--	--	--	--	--	--	--	--	--		
1010																				
06/12/75	5/5N	47N/01E-08J02	M	62.0F 16.7C	7.2	760	--	--	--	--	--	--	--	--	--	--	--	--		
0925																				
06/12/75	5/5N	47N/01E-32A01	M	7.0F 21.1C	8.1	222	--	--	--	--	--	--	--	--	--	--	--	--		
1145																				
06/11/75	5/5N	47N/01E-30F01	M	55.0F 12.8C	7.9	400	--	--	--	--	--	--	--	--	--	--	--	--		
1415																				

TABLE E-1 cont  
MINERAL ANALYSES OF GROUND WATER

[illegible]

TABLE E-1 CONT  
MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLE L-#	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN										MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3		B	F	*OS	TH						
				NORTH COASTAL SHASTA VALLEY																			
06/18/75 1300	5 60 5 60	54.0 / 54-25.1	M 54.0F 14.2C	6.4	347	--	--	--	--	--	--	--	3.5 .10	1.1 .02	--	--	--	--	124	--	--	--	
06/18/75 1330	5 60 5 60	54.0 / 54-15.0	M 54.0F 13.9C	7.3	676	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
06/18/75 1545	5 60 5 60	53.0 / 54-17.0	M 53.0F 14.4C	6.2	2400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
06/18/75 1576	5 60 5 60	53.0 / 54-16.0	M 53.0F 11.1C	7.0	280	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
06/18/75 1715	5 60 5 60	54.0 / 54-21.0	M 54.0F 14.4C	6.1	604	24	14	7.9	4	0	1.3	0.1	2.1	6.8	4.0	--	187	150	0	0.3	--	--	
06/18/75 1500	5 60 5 60	54.0 / 54-30.0	M 54.0F 14.9C	7.2	1040	--	--	--	--	--	--	--	5.4	6.0	--	--	--	--	193	--	--	--	
06/18/75 144	5 60 5 60	54.0 / 54-15.0	M 54.0F 14.2C	7.3	660	--	--	--	--	--	--	--	2.0	20.0	--	--	--	--	233	--	--	--	
06/18/75 1475	5 60 5 60	54.0 / 54-23.0	M 54.0F 15.5C	6.2	648	31	22	13	1.6	0	2.9	14	21	10.0	4.30	--	287	168	0	1.1	--	--	
06/20/75 1400	5 60 5 60	54.0 / 54-18.0	M 54.0F 14.5C	6.3	1026	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
06/20/75 0815	5 60 5 60	54.0 / 54-15.0	M 54.0F 14.2C	7.2	347	--	--	--	--	--	--	--	3.4	1.8	--	--	--	--	104	--	--	--	
06/20/75 094	5 60 5 60	54.0 / 54-20.0	M 54.0F 14.4C	6.3	510	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
06/20/75 0926	5 60 5 60	54.0 / 54-27.0	M 54.0F 15.0C	6.6	566	--	--	--	--	--	--	--	2.1	29.0	--	--	--	--	228	--	--	--	
06/19/75 0800	5 60 5 60	54.0 / 54-30.0	M 54.0F 14.3C	7.5	481	--	--	--	--	--	--	--	1.0	24.0	--	--	--	--	192	--	--	--	
SCOTT RIVER VALLEY																							
06/19/75 1431	5 60 5 60	54.0 / 54-20.0	M 54.0F 14.2C	7.2	646	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
06/19/75 1051	5 60 5 60	54.0 / 54-27.0	M 54.0F 14.3C	7.0	104	--	--	--	--	--	--	--	4.0	3.6	--	--	--	--	38	--	--	--	
06/19/75 1045	5 60 5 60	54.0 / 54-24.0	M 54.0F 15.0C	6.4	154	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
06/19/75 1215	5 60 5 60	53.0 / 54-18.0	M 53.0F 14.8C	6.4	120	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
06/19/75 1231	5 60 5 60	54.0 / 54-18.0	M 54.0F 14.8C	6.3	126	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
06/19/75 1121	5 60 5 60	53.0 / 54-20.0	M 53.0F 21.1C	6.7	80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
06/19/75 1150	5 60 5 60	53.0 / 54-11.0	M 53.0F 14.0C	6.4	70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

TABLE E-1 cont  
MINERAL ANALYSES OF GROUND WATER

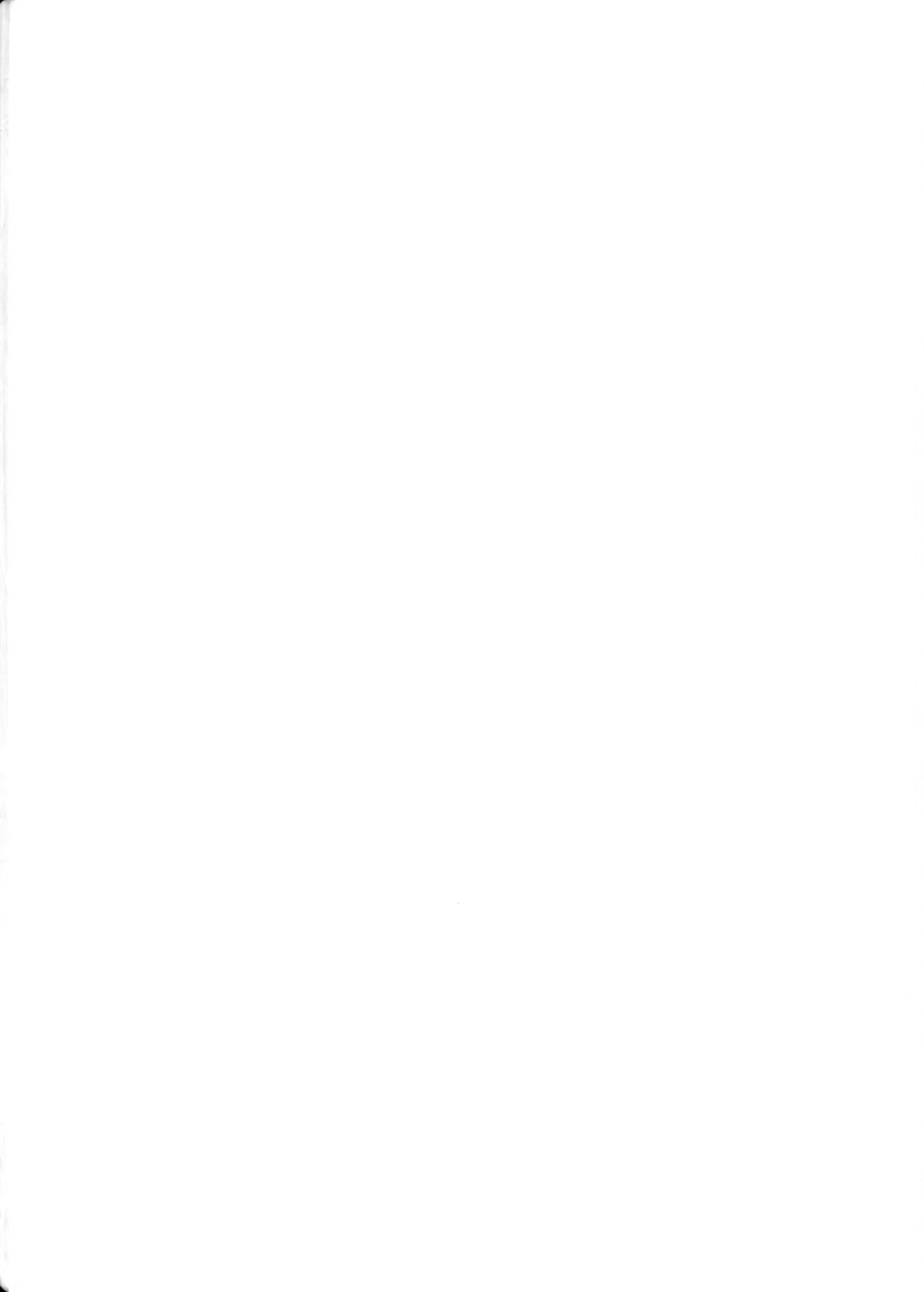
DATE TIME	SAMPLE LUG	TMR	FIELD LABORATORY PM		FC	MINERAL CONSTITUENTS IN										MILLIGRAMS PER LITER EQUIVALENTS PER LITER					MILLIGRAMS PER LITER				
			Ca	Mg		Na	K	CU3	MCU3	PERCENT REACTANCE VALUE	SO4	CL	NO3	H	F	TDS GUM	TH MCM	SAR							
*****																									
NORTH COASTAL REGION																									
SCOTT RIVER VALLEY																									
06/19/75	5-50	1-44N/ 44-34001	H	66.0F	6.4	6.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1345				14.9C																					
MAYBANK VALLEY																									
06/09/75	5-50	31N/12-12001	H	54.0F	6.2	25.0	22	17	6.2	4.4	0	132	1.8	2.5	1	1.00	--	132	103	--	--	132	103	0	0.3
1214				14.2C	6.3	21.9	1.10	4.4	27	11	1	2.10	1.02	1.07	1	1.00	--	109	0	--	--	0	0.3		
06/09/75	5-50	31N/12-15001	H	57.0F	6.7	39.5	--	--	--	--	--	--	--	2.0	1.2	--	--	--	--	--	--	--	--	--	157
1154				13.9C		34.5								1.56	1.00	--	--			--	--				
MAD RIVER VALLEY																									
09/12/74	5-50	15N/ 15-04004	H	61.0F	6.1	48.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0904				16.1C																					
09/11/75	5-50	16N/ 16-07001	H	6.0F	6.5	52.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0955				14.5C																					
09/12/75	5-50	16N/ 16-08001	H	57.0F	6.1	18.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1014				13.9C																					
09/11/75	5-50	16N/ 16-19001	H	62.0F	7.5	37.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1044				14.7C																					
09/11/75	5-50	16N/ 16-01001	H	65.0F	6.1	19.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0935				14.8C																					
FIDLER PLAIN																									
09/12/75	5-50	15N/ 15-18001	H	62.0F	7.4	45.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0814				14.7C																					
09/12/75	5-50	15N/ 15-20001	H	64.0F	6.6	29.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0844				12.2C																					
09/11/75	5-50	14N/ 14-08001	H	61.0F	7.4	16.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1324				14.1C																					
09/11/75	5-50	14N/ 14-14001	H	64.0F	7.6	46.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1354				14.8C																					
09/11/75	5-50	14N/ 14-17001	H	61.0F	7.4	18.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1334				14.1C																					
09/12/75	5-50	15N/ 15-20001	H	6.0F	6.6	31.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1045				14.5C																					
EPL RIVER VALLEY																									
09/11/75	5-50	12N/ 12-14001	H	54.0F	6.2	57.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1514				15.0C																					
09/12/75	5-50	12N/ 12-07001	H	54.0F	7.4	46.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1400				13.3C																					
09/11/75	5-50	13N/ 13-18001	H	54.0F	7.3	46.0	16	18	6.1	1.2	11	62.2	26	15	3.9	1.00	1	254	117	--	--	254	117	0	2.5
1445				13.0C	6.4	47.4	16.0	1.44	2.85	1.03	1.37	34.04	1.54	1.42	1.00	--	1	261	0	--	--	0	0		
09/12/75	5-50	13N/ 13-32001	H	54.0F	6.4	44.0	26	26	6.1	2.7	0	63	1.44	2.25	1.0	1.00	--	471	173	--	--	471	173	139	2.7
1334				14.9C	7.4	45.5	1.30	2.14	3.52	1.07	1.0	1.06	1.03	1.40	1.02	--	1	483	139	--	--	139	139		
09/11/75	5-50	13N/ 13-35001	H	54.0F	6.4	70.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1605				14.2C																					

MINERAL ANALYSES OF GROUND WATER

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